

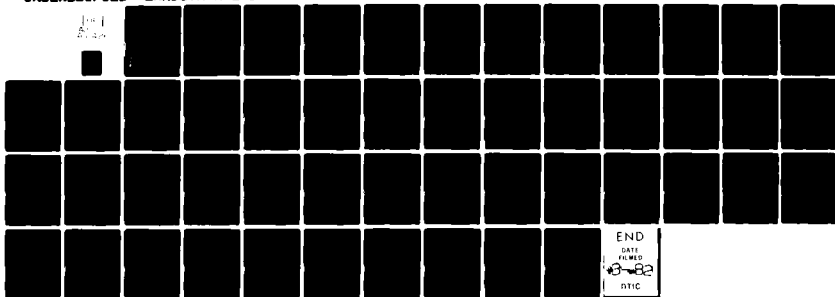
AD-A111 926

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/8 5/2
20003A ASSAULT BREAKER, MISSILE NUMBER 0008, ROUND NUMBER M403,--ETC(U)
DEC 81 D C KELLER
ERADCOM/ASL-DR-1217

UNCLASSIFIED

NL

1-1
A-1



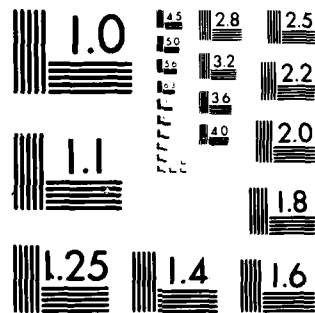
END

DATE

FILED

8-82

DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

12

DR 1217
December 1981
AD

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

AD A111426

METEOROLOGICAL DATA REPORT

20403A Assault Breaker
Missile Number 0008
Round Number M4G3
17 December 1981

SDTIC
ELECTE
MAR 01 1982
E

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

.....
ECONOM

UNITED STATES ARMY ELECTRONICS COMMAND

82 03 01 008

ONE FILE COPY

DISPOSITION INSTRUCTIONS

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

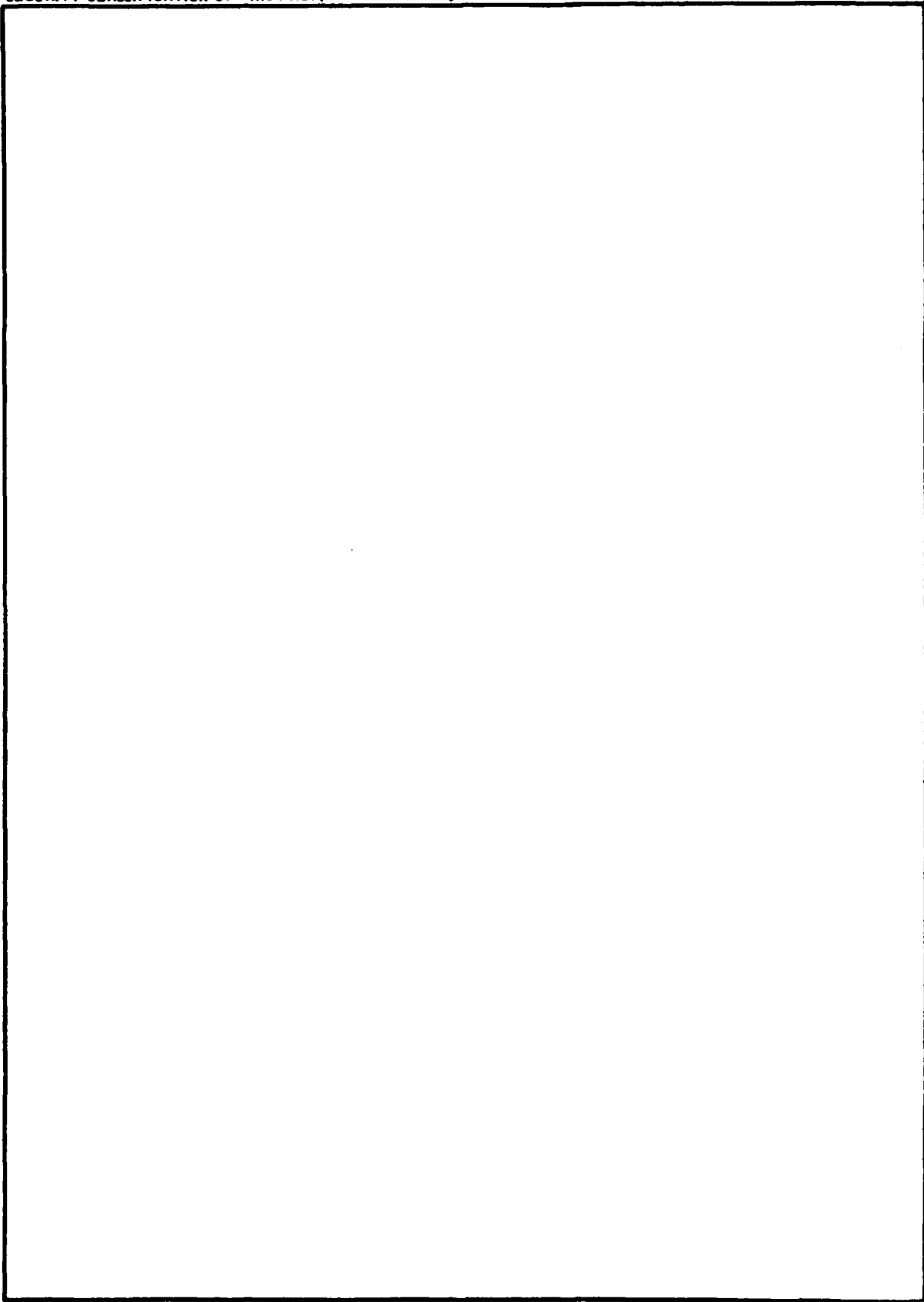
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1217	2. GOVT ACCESSION NO. HD-A111 426	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 20403A Assault Breaker Missile Number #0008 Round Number M-4G3		5. TYPE OF REPORT & PERIOD COVERED
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) White Sands Meteorological Team		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		12. REPORT DATE December 1981
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Cmd Adelphi, MD 20783		13. NUMBER OF PAGES 49
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 20403A Assault Breaker, Missile Number #0008, Round Number M-4G3 presented in tabular form.		

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)



SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

CONTENTS

	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
 TABLES:	
1. Surface Observations taken at 0840 MST at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 0841 MST-----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3 and 4, taken at 0841 MST-----	5
4. Surface Observations taken at 0840 and 0910 MST at JALLEN Site-----	6
5. WSD Pilot-Balloon Measured Wind Data at 0821 MST-----	7
6. WSD Pilot-Balloon Measured Wind Data at 0847 MST-----	8
7. JALLEN Computer Met Message at 0600 MST-----	9
8. JALLEN Significant Level Data at 0600 MST-----	10
9. JALLEN Upper Air Data at 0600 MST-----	11
10. JALLEN Mandatory Levels at 0600 MST-----	13
11. Holloman Significant Level Data at 0830 MST-----	14
12. Holloman Upper Air Data at 0830 MST-----	17
13. Holloman Mandatory Levels at 0830 MST-----	22
14. WSD Significant Level Data at 0840 MST-----	24
15. WSD Upper Air Data at 0840 MST-----	26
16. WSD Mandatory Levels at 0840 MST-----	30

TABLES (CON'T)

	PAGE
17. JALLEN Significant Level Data at 0840 MST-----	31
18. JALLEN Upper Air Data at 0840 MST-----	33
19. JALLEN Mandatory Levels at 0840 MST-----	38
20. LC-37 Significant Level Data at 0930 MST-----	39
21. LC-37 Upper Air Data at 0930 MST-----	40
22. LC-37 Mandatory Levels at 0930 MST-----	44

Accession For

MSI ☒ ☐

LS ☐ ☐

Unpublished ☐

Classification

Excluded

Excluded

As listed by Codes

or

Dist

A

INTRODUCTION

20403A Assault Breaker, Missile Number #0008, Round Number M-4G3, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0841 MST, 17 December 1981. The scheduled launch time was 0830 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations.

a. Surface:

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind speed and direction, and cloud cover were made at the LC-33 Met Site at T-0 minutes, and JALLEN Met Site at T+30 and T-0 minutes.

(2) Anemometer data were provide from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provide in the launch control room.

b. Upper Air:

(1) Low level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE

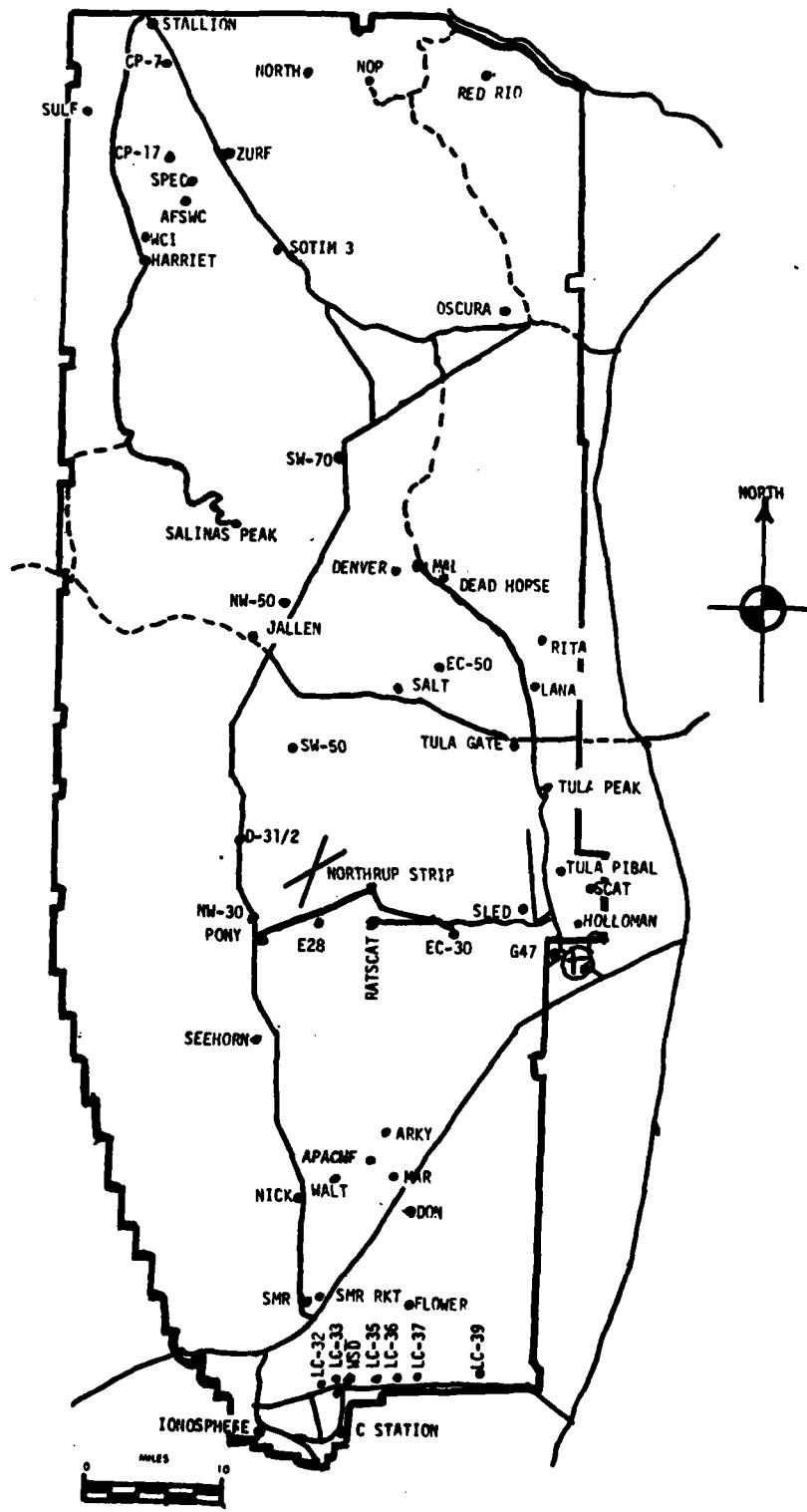
WSD 3 KM
WSD 3 KM

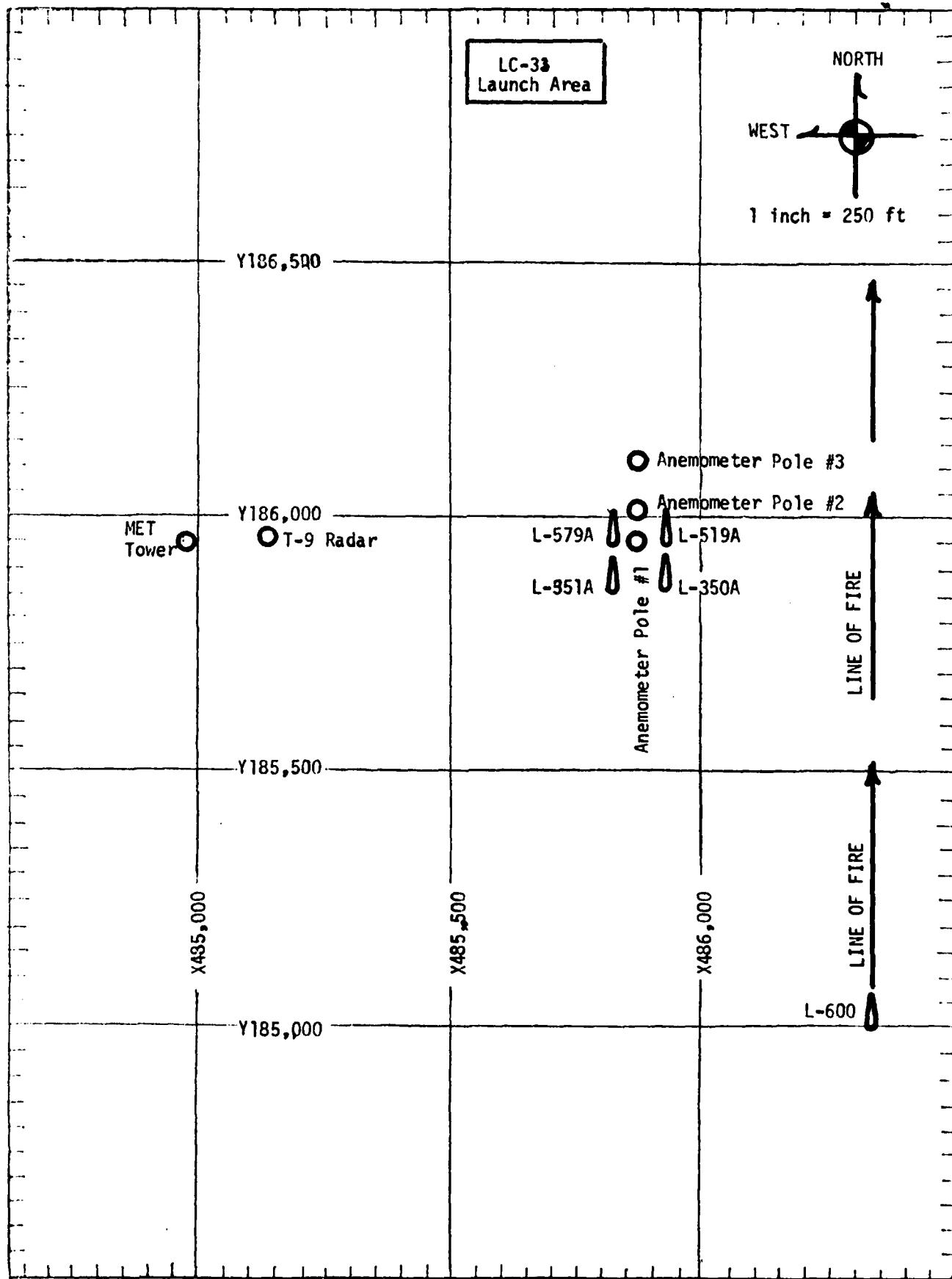
(2) Air structure data (rawinsonde) were collected at the following Met Sites:

SITE AND TIME

JALLEN	0600 MST
Holloman	0830 MST
WSD	0840 MST
JALLEN	0840 MST
LC-37	0930 MST

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1		STATION LC-33									
DATE 17		Dec		1981		X= 485,135.76		Y= 185,919.24		H= 3,988.60	
DAY		MONTH		YEAR							
TIME	TH	PR	TE	DE	REL	DEN	DIR	WIND	CHAR	VIS	
M	S	mb	OC	OF	%	gm/m ³	deg	speed	kts	ITY	
0840		884.9	5.1	-2.2	56	1105	345	03		50	

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	AMT	TYPE	AMT	TYPE	
1	CI	25,000					

PSYCHROMETRIC COMPUTATION

TIME:	MST	0840
DRY BULB TEMP.	5.1	
WET BULB TEMP.	1.9	
WET BULB DEPR.	3.2	
DEW POINT	-2.2	
RELATIVE HUMID.	56	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4062.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	320	03	T-30	345	03	T-30	344	05
T-20	320	02	T-20	329	03	T-20	343	05
T-10	321	02	T-10	329	02	T-10	350	04
T0.0	310	02	T0.0	339	02	T0.0	350	04
T+10	311	02	T+10	335	02	T+10	350	03

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	354	02	T-30	344	04
T-20	358	03	T-20	325	03
T-10	345	03	T-10	324	03
T0.0	338	03	T0.0	324	03
T+10	337	03	T+10	329	03

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	329	03	T-30	314	06
T-20	328	03	T-20	314	05
T-10	322	03	T-10	312	04
T0.0	330	03	T0.0	310	04
T+10	331	03	T+10	313	04

PROJECT SURFACE OBSERVATION

TABLE 4										STATION JALLEN-R			
DATE 17		Dec		1981		X=		Y=		H=			
DAY		MONTH		YEAR									
TIME	M	S	I	PRESSURE	TEMPERATURE	DEW POINT	RELATIVE	DENSITY	DIRECTION	WIND	VISIBIL-		
				mbs	OF	OC	HUMIDITY	gm/m ³	deg	SPEED	ITY		
							%		Trn	kts			
0840				884.1		5.2		-5.3	46	1102	60	08	50
0910				884.8		7.2		-5.5	40	1095	40	04	50

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
	C	L	E	A	R		
	C	L	E	A	R		

PSYCHROMETRIC COMPUTATION

TIME: MST	0840	0910
DRY BULB TEMP.	5.2	7.2
WET BULB TEMP.	0.9	1.9
WET BULB DEPR.	4.3	5.3
DEW POINT	-5.3	-5.5
RELATIVE HUMID.	46	40

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM WSD

DATE 17 Dec 1981

TIME 0821 MST

COORDINATES (WSTM) X= 488,580.00 Y= 185,045.00 H= 3,989.50

NOTE: WIND DIRECTIONS ARE REFERENCED TO _____

HEIGHTS ARE METERS AGL X OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
sfc	360	01
60	M I S	G
120	339	05
180	050	04
240	154	02
300	154	02
360	040	01
420	021	07
480	021	10
540	010	12
600	014	14
660	016	12
720	003	13
780	360	14
840	004	18
900	005	19
960	008	17
1020	008	16
1080	007	15
1140	004	14
1200	355	13
1260	342	12
1320	308	10
1380	277	10
1440	278	11
1500	284	12
1560	294	14
1620	307	16
1680	294	15
1740	289	17

[illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM WSD DATE 17 Dec 1981 TIME 0847 MST

COORDINATES (WSTM) X= 488,580.00 Y= 185,045.00 H= 3,989.50

NOTE: WIND DIRECTIONS ARE REFERENCED TO

HEIGHTS ARE METERS AGL X OR FEET AGL .

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
sfc	010	02
60	M I	S G
120	337	03
180	002	06
240	347	03
300	284	02
360	210	02
420	009	04
480	026	08
540	018	12
600	018	14
660	015	15
720	006	15
780	003	17
840	002	19
900	003	18
960	005	17
1020	008	17
1080	357	17
1140	343	13
1200	342	09
1260	346	08
1320	307	07
1380	284	09
1440	290	10
1500	287	12
1560	305	14
1620	309	14
1680	305	16
1740	295	16

[illegible][illegible]

JALLEN COMPUTER MET MESSAGES
17 December 1981

JALLEN 0600 MST
METCM1332065
171200124881
00631003 27570881
01101010 27960810
02059005 27970844
03058005 27820804
04536013 27550756
05498025 27320710
06505025 27030667
07515032 26680626
08530039 26300587
09540048 26010550
10537053 25760515
11532053 26450482
12520055 24890435
13516061 24150379

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

SIGNIFICANT LEVEL DATA
3510030221
JALLEN

TABLE 8

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 61 0600 HRS MST
ASCENSION NO. 221

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
		AIR	DEWPOINT	
881.0	4051.0	1.5	-6.3	56.0
874.6	4245.2	5.0	-4.5	50.0
869.9	4390.0	6.6	-5.1	43.0
850.0	5013.2	6.1	-6.5	40.0
818.6	6025.1	5.6	-6.9	40.0
764.8	7839.8	2.1	-7.5	49.0
729.8	9079.9	.9	-7.3	54.0
700.0	10177.0	-1.1	-11.8	44.0
670.2	11313.5	-2.9	-19.2	27.0
657.8	11798.9	-3.6	-20.3	26.0
573.0	15328.7	-11.7	-23.4	37.0
500.0	18728.6	-16.7	-29.8	31.0
446.5	21492.0	-22.8	-32.4	41.0
400.0	24112.5	-29.0	-41.0	30.0
366.1	26178.1	-33.3	-44.5	31.0
352.7	27036.5	-35.4	-46.4	31.0

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 61
ASCENSION NO. 221

UPPER AIR DATA
3510030221
JALLEN
TABLE 9

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	EL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
4051.0	881.0	1.5	-6.3	56.0	1115.6	646.2	355.0	1.000268
4500.0	866.4	6.5	-5.3	42.5	1077.3	652.1	356.9	1.000260
5000.0	850.4	6.1	-6.4	40.1	1059.1	651.6	358.4	1.000254
5500.0	834.7	5.9	-6.7	40.0	1040.5	651.3	359.6	1.000250
6000.0	819.4	5.6	-6.9	40.0	1022.2	651.0	360.0	1.000245
6500.0	804.2	4.7	-7.0	42.4	1006.6	649.9	361.3	1.000242
7000.0	789.2	3.7	-7.1	44.8	991.3	648.8	362.7	1.000239
7500.0	774.6	2.8	-7.3	47.3	976.3	647.7	364.1	1.000235
8000.0	760.2	1.9	-7.5	49.6	961.0	646.7	365.5	1.000232
8500.0	746.0	1.5	-7.4	51.7	944.6	646.2	367.0	1.000228
9000.0	732.0	1.0	-7.3	53.7	928.6	645.6	368.4	1.000225
9500.0	718.2	.1	-9.0	50.2	914.1	644.5	369.8	1.000219
10000.0	704.7	-8	-11.0	45.6	900.1	643.4	371.2	1.000214
10500.0	691.4	-1.6	-13.7	39.2	886.0	642.3	372.6	1.000208
11000.0	678.3	-2.4	-16.9	31.7	872.0	641.3	374.0	1.000203
11500.0	665.4	-3.2	-19.6	26.6	858.0	640.4	375.4	1.000198
12000.0	652.6	-4.1	-20.4	26.6	844.3	639.3	376.8	1.000194
12500.0	640.0	-5.2	-20.7	28.2	831.5	637.9	378.2	1.000191
13000.0	627.6	-6.4	-21.1	29.7	819.0	636.5	379.6	1.000188
13500.0	615.5	-7.5	-21.6	31.3	806.6	635.2	381.0	1.000186
14000.0	603.6	-8.7	-22.0	32.9	794.4	633.8	382.4	1.000183
14500.0	591.9	-9.8	-22.5	34.4	782.4	632.4	383.8	1.000180
15000.0	580.4	-10.9	-23.0	36.0	770.7	631.0	385.2	1.000177
15500.0	569.1	-12.0	-23.7	36.7	758.5	629.8	386.6	1.000174
16000.0	557.8	-12.7	-24.7	35.8	745.6	628.9	388.0	1.000171
16500.0	546.7	-13.4	-25.6	34.9	732.9	628.0	389.4	1.000168
17000.0	535.9	-14.2	-26.5	34.1	720.4	627.1	390.8	1.000164
17500.0	525.2	-14.9	-27.5	33.2	708.2	626.2	392.2	1.000161
18000.0	514.8	-15.6	-28.4	32.3	696.1	625.3	393.6	1.000158
18500.0	504.6	-16.4	-29.3	31.4	684.3	624.4	395.0	1.000155
19000.0	494.5	-17.3	-30.0	32.0	673.0	623.5	396.4	1.000153
19500.0	484.5	-18.4	-30.4	33.1	662.2	621.9	397.8	1.000150
20000.0	474.6	-19.5	-30.8	35.6	651.6	620.6	399.2	1.000148
20500.0	465.0	-20.6	-31.3	37.4	641.2	619.2	400.6	1.000145
21000.0	455.6	-21.7	-31.8	39.2	631.0	617.9	402.0	1.000143
21500.0	446.3	-22.8	-32.4	41.0	620.9	616.5	403.4	1.000141
22000.0	437.1	-24.0	-34.0	38.9	611.0	615.0	404.8	1.000138
22500.0	428.0	-25.2	-35.6	36.8	601.2	613.5	406.2	1.000136
23000.0	419.1	-26.4	-37.3	34.7	591.5	612.1	407.6	1.000133
23500.0	410.4	-27.6	-38.9	32.6	582.0	610.6	409.0	1.000131

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 81 0600 HRS MST
ASCENSION NO. 221

UPPER AIR DATA

3510030221
JALLEN

GEODETIC COORDINATES
33.16712 LAT UEG
106.49511 LON UEG

TABLE 9 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
24000.0	401.9	-28.7	30.5	572.7	609.1	294.1	58.8	1.000129
24500.0	393.4	-29.8	30.2	563.1	607.8	293.8	59.8	1.000126
25000.0	385.1	-30.8	30.4	553.5	606.5	293.5	60.8	1.000124
25500.0	376.9	-31.9	30.7	544.1	605.2	293.3	62.0	1.000122
26000.0	368.9	-32.9	30.9	534.9	603.8			1.000120
26500.0	361.0	-34.1	31.0	526.0	602.4			1.000118
27000.0	353.3	-35.3	31.0	517.4	600.8			1.000116

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 81
ASCENSION NO. 221

MANDATORY LEVELS
3510030221
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 10

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
HILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5010.	6.1	-6.5	40.	358.5	3.9
800.0	6636.	4.4	-7.0	43.	354.5	5.5
750.0	8351.	1.6	-7.4	51.	295.1	13.8
700.0	10168.	-1.1	-11.8	44.	285.1	23.0
650.0	12096.	-4.3	-20.5	27.	284.5	29.7
600.0	14147.	-9.0	-22.2	33.	293.4	35.1
550.0	16338.	-13.2	-25.3	35.	303.8	47.1
500.0	18704.	-16.7	-29.8	31.	299.9	51.3
450.0	21273.	-22.4	-32.2	40.	292.5	53.7
400.0	24074.	-29.0	-41.0	30.	294.0	59.0

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81
ASCENSION NO. 319

SIGNIFICANT LEVEL DATA
3510010319
HOLLOMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DWPOINT CENTIGRADE	
881.4	4126.6	4.5	-1.7	64.0
874.2	4346.2	4.7	-2.2	61.0
860.1	4783.4	6.8	-3.4	48.0
850.0	5101.8	6.4	-4.9	44.0
828.0	5807.0	5.4	-6.8	41.0
818.8	6107.1	5.8	-7.1	39.0
769.3	7770.5	1.6	-10.2	41.0
746.0	8582.5	.0	-8.2	54.0
710.6	9858.8	-1.6	-7.5	64.0
700.0	10252.1	-1.9	-8.0	63.0
667.2	11505.0	-2.5	-22.9	19.0
623.2	13277.1	-4.4	-22.4	23.0
611.5	13766.3	-6.0	-21.9	27.0
573.2	15423.6	-8.3	-27.7	19.0
500.0	18864.8	-15.1	-32.0	22.0
467.7	20514.6	-18.4	-34.8	22.0
400.0	24285.5	-27.4	-41.3	25.0
367.6	26269.6	-31.5	-45.3	24.0
330.7	28700.3	-38.1	-50.7	25.0
300.0	30884.9	-43.1		
274.9	32807.4	-46.9		
250.0	34852.8	-52.7		
224.8	37082.3	-58.6		
200.0	39480.9	-62.4		
182.7	41315.5	-63.7		
176.0	42074.2	-61.9		
169.7	42817.2	-62.1		
159.1	44131.4	-62.1		
150.0	45334.2	-61.2		

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81
ASCENSION NO. 319

SIGNIFICANT LEVEL DATA
3510010319
HOLLUMAN

GEODETIC COORDINATES
32.68865 LAT DEG
106.09965 LON DEG

TABLE 11 CON'T

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
881.4	4.5	-1.7	64.0
874.2	4.7	-2.2	61.0
860.1	6.8	-3.4	48.0
850.0	6.4	-4.9	44.0
828.0	5.4	-6.8	41.0
818.8	5.8	-7.1	39.0
769.3	1.6	-10.2	41.0
746.0	.0	-6.2	54.0
710.6	-1.6	-7.5	64.0
700.0	-1.9	-8.0	63.0
667.2	-2.5	-22.9	19.0
623.2	-4.4	-22.4	23.0
611.5	-6.0	-21.9	27.0
573.2	-8.3	-27.7	19.0
500.0	-15.1	-32.0	22.0
467.7	-18.4	-34.8	22.0
400.0	-27.4	-41.3	25.0
367.6	-31.5	-45.3	25.0
330.7	-38.1	-50.7	
300.0	-43.1		
274.9	-46.9		
250.0	-52.7		
224.8	-58.6		
200.0	-62.4		
182.7	-63.7		
176.0	-61.9		
169.7	-62.1		
159.1	-62.1		
150.0	-61.2		
135.2	-64.0		
125.8	-62.9		
107.7	-66.4		
100.0	-66.7		
95.6	-65.9		
93.4	-64.0		
84.0	-62.6		
73.7	-64.9		
70.0	-61.7		
57.1	-63.9		
50.0	-64.5		

STATION ALTITUDE 4126.59 FEET MSL
 17 DEC. 81 0830 HRS MST
 ASCENSION NO. 319

SIGNIFICANT LEVEL DATA
 3510010319
 HOLLUMAN

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

TABLE 11 CON'T

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
42.6 70819.4	-61.0		
38.2 73057.3	-61.2		
30.0 78082.6	-55.6		
27.7 79771.3	-53.6		
23.9 82908.9	-53.8		
20.5 86179.5	-52.7		

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 61
ASCENSION NO. 319

UPPER AIR DATA
3510010319
HOLLOMAN
TABLE 12

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND METER KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (IN)	SPEED KNOTS	
4126.6	881.4	4.5	-1.7	64.0	1103.3	649.9	230.0	4.1	1.000272
4500.0	869.2	5.4	-2.5	56.4	1084.5	651.0			1.000266
5000.0	853.2	6.5	-4.4	45.3	1060.7	652.1			1.000258
5500.0	837.5	5.8	-6.0	42.3	1043.9	651.3			1.000252
6000.0	822.1	5.7	-7.0	39.7	1025.5	651.0			1.000246
6500.0	806.8	4.8	-7.8	39.5	1009.6	650.0			1.000242
7000.0	791.8	3.5	-8.7	40.1	995.4	648.5			1.000237
7500.0	777.1	2.3	-9.7	40.7	981.5	647.0			1.000233
8000.0	762.6	1.1	-9.5	44.7	967.2	645.7			1.000230
8500.0	748.3	.2	-8.3	52.7	952.3	644.6			1.000229
9000.0	734.2	-.5	-7.9	57.3	936.6	643.8			1.000226
9500.0	720.4	-1.2	-7.7	61.2	921.0	643.1			1.000223
10000.0	706.8	-1.7	-7.7	63.6	905.4	642.4	312.3	18.5	1.000219
10500.0	693.4	-2.0	-10.0	54.3	889.5	642.0	307.7	28.4	1.000213
11000.0	680.2	-2.3	-15.0	36.7	873.9	641.5	300.4	34.9	1.000204
11500.0	667.3	-2.5	-22.8	19.2	858.5	641.1	296.1	38.1	1.000196
12000.0	654.6	-3.0	-22.7	20.1	843.8	640.5	293.1	36.3	1.000193
12500.0	642.1	-3.6	-22.5	21.2	829.3	639.8	293.9	36.3	1.000190
13000.0	629.9	-4.1	-22.4	22.4	815.1	639.2	296.8	37.3	1.000187
13500.0	617.8	-5.1	-22.1	24.8	802.5	638.0	300.2	38.6	1.000184
14000.0	605.9	-6.3	-22.7	25.9	790.6	636.6	303.6	40.0	1.000181
14500.0	594.2	-7.0	-24.4	23.5	777.4	635.7	308.9	41.6	1.000178
15000.0	582.8	-7.7	-26.1	21.0	764.5	634.9	312.9	43.1	1.000174
15500.0	571.5	-8.5	-27.8	19.1	751.8	634.0	313.8	44.0	1.000171
16000.0	560.2	-9.4	-28.4	19.5	739.8	632.8	313.4	45.0	1.000168
16500.0	549.2	-10.4	-29.0	19.9	728.0	631.6	311.8	46.1	1.000165
17000.0	538.4	-11.4	-29.6	20.4	716.4	630.4	308.7	47.3	1.000162
17500.0	527.8	-12.4	-30.2	20.8	705.0	629.2	305.6	48.7	1.000160
18000.0	517.5	-13.4	-30.9	21.2	693.7	628.0	302.1	48.5	1.000157
18500.0	507.3	-14.4	-31.5	21.7	682.7	626.8	298.6	48.5	1.000155
19000.0	497.3	-15.4	-32.2	22.0	671.8	625.6	297.4	50.4	1.000152
19500.0	487.3	-16.4	-33.0	22.0	660.9	624.4	296.7	52.0	1.000149
20000.0	477.5	-17.4	-33.9	22.0	650.2	623.1	297.0	52.5	1.000147
20500.0	468.0	-18.4	-34.8	22.0	639.7	621.9	297.4	52.8	1.000144
21000.0	458.4	-19.6	-35.6	22.4	629.5	620.5	297.7	52.8	1.000142
21500.0	449.0	-20.8	-36.5	22.8	619.5	619.0	298.5	54.8	1.000140
22000.0	439.8	-21.9	-37.3	23.2	609.7	617.5	299.4	57.9	1.000137
22500.0	430.7	-23.1	-38.2	23.6	600.1	616.1	300.3	56.6	1.000135
23000.0	421.9	-24.3	-39.0	24.0	590.6	614.6	300.9	55.2	1.000133
23500.0	413.2	-25.5	-39.9	24.4	581.3	613.1	300.6	54.4	1.000131

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81 0830 HRS MST
ASCENSION NO. 319

UPPER AIR DATA
3510010319
HOLLONAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 12 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INJEX OF REFRACTION
						DIRECTION (DEGREES(TN))	SPEED KNOTS	
24000.0	404.8	-26.7	24.8	572.1	611.6	299.3	54.8	1.000128
24500.0	396.4	-27.8	24.9	562.8	610.2	297.4	56.4	1.000126
25000.0	388.0	-28.9	24.6	553.3	608.9	296.4	56.6	1.000124
25500.0	379.8	-29.9	24.4	543.9	607.6	296.1	56.5	1.000122
26000.0	371.8	-30.9	24.1	534.8	606.3	297.0	56.5	1.000120
26500.0	363.9	-32.1	24.1	526.0	604.8	298.2	56.0	1.000118
27000.0	356.1	-33.5	24.3	517.6	603.1	299.5	55.3	1.000116
27500.0	348.4	-34.8	24.5	509.3	601.4	300.3	55.6	1.000114
28000.0	340.9	-36.2	24.7	501.2	599.7	300.9	56.2	1.000112
28500.0	333.6	-37.6	24.9	493.2	598.0	300.7	57.8	1.000110
29000.0	326.3	-38.8	21.6**	485.0	596.4	300.4	59.6	1.000108
29500.0	319.1	-39.9	15.8**	476.6	595.0	299.7	62.0	1.000106
30000.0	312.1	-41.1	10.1**	468.4	593.5	299.1	63.8	1.000104
30500.0	305.2	-42.2	4.4**	460.4	592.0	299.1	63.7	1.000103
31000.0	298.4	-43.3		452.4	590.6	299.1	63.3	1.000101
31500.0	291.7	-44.3		444.1	589.3	299.6	60.1	1.000099
32000.0	285.2	-45.3		436.0	588.1	300.1	57.0	1.000097
32500.0	278.8	-46.3		428.1	586.8	300.4	54.8	1.000095
33000.0	272.5	-47.4		420.5	585.3	300.8	52.5	1.000094
33500.0	266.2	-48.9		413.5	583.4	300.1	50.4	1.000092
34000.0	260.1	-50.3		406.6	581.6	299.3	48.3	1.000091
34500.0	254.1	-51.7		399.8	579.7	296.8	46.3	1.000089
35000.0	248.3	-53.1		393.0	577.9	294.0	44.4	1.000088
35500.0	242.4	-54.4		386.1	576.2	291.0	45.4	1.000086
36000.0	236.7	-55.7		379.3	574.4	288.2	47.4	1.000084
36500.0	231.1	-57.1		372.6	572.7	286.3	50.8	1.000083
37000.0	225.7	-58.4		366.1	570.9	285.1	55.1	1.000082
37500.0	220.3	-59.3		358.8	569.8	284.2	58.4	1.000080
38000.0	215.0	-60.1		351.4	568.7	283.6	60.4	1.000078
38500.0	209.6	-60.8		344.2	567.6	283.1	62.4	1.000077
39000.0	204.7	-61.6		337.2	566.6	282.9	63.6	1.000075
39500.0	199.8	-62.4		330.3	565.5	282.7	64.9	1.000074
40000.0	194.9	-62.8		322.8	565.1	282.8	68.4	1.000072
40500.0	190.2	-63.1		315.5	564.6	283.0	72.0	1.000070
41000.0	185.6	-63.5		308.3	564.1	282.7	73.7	1.000069
41500.0	181.0	-63.3		300.5	564.4	282.4	75.2	1.000067
42000.0	176.6	-62.1		291.5	566.0	282.2	75.3	1.000065
42500.0	172.4	-62.0		284.4	566.1	282.0	75.3	1.000063
43000.0	168.2	-62.1		277.6	566.0	282.7	76.4	1.000062
43500.0	164.1	-62.1		270.9	566.0	283.4	77.5	1.000060

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81 0830 HRS MST
ASCENSION NO. 319

UPPER AIR DATA
3510010319
HOLLUMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 12 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
44000.0	160.1	-62.1		264.3	566.0	284.1	78.2	1.000059
44500.0	156.3	-61.8		257.6	566.3	284.0	78.8	1.000057
45000.0	152.5	-61.5		250.9	566.8	285.2	79.1	1.000056
45500.0	148.8	-61.4		244.8	566.9	284.2	78.8	1.000055
46000.0	145.2	-62.1		239.6	566.0	283.2	78.6	1.000053
46500.0	141.6	-62.7		234.5	565.1	282.6	76.4	1.000052
47000.0	138.2	-63.4		229.5	564.2	281.9	73.8	1.000051
47500.0	134.8	-64.0		224.6	563.5	282.9	70.4	1.000050
48000.0	131.6	-63.6		218.7	564.0	286.4	65.9	1.000049
48500.0	128.3	-63.2		213.0	564.5	290.4	61.9	1.000047
49000.0	125.2	-63.0		207.6	564.7	293.9	59.3	1.000046
49500.0	122.1	-63.6		203.0	564.0	297.6	56.9	1.000045
50000.0	119.1	-64.1		198.6	563.2	298.1	53.6	1.000044
50500.0	116.2	-64.7		194.2	562.5	297.9	50.2	1.000043
51000.0	113.4	-65.2		190.0	561.7	297.4	46.9	1.000042
51500.0	110.6	-65.8		185.8	561.0	296.6	43.8	1.000041
52000.0	107.9	-66.4		181.8	560.2	295.4	41.9	1.000040
52500.0	105.2	-66.5		177.4	560.0	293.3	42.6	1.000040
53000.0	102.6	-66.6		173.1	559.9	291.3	43.6	1.000039
53500.0	100.1	-66.7		168.9	559.8	289.0	47.3	1.000038
54000.0	97.6	-66.3		164.4	560.3	287.0	51.1	1.000037
54500.0	95.2	-65.6		159.8	561.3	286.3	51.8	1.000036
55000.0	92.9	-63.9		154.6	563.5	285.9	51.8	1.000034
55500.0	90.6	-63.6		150.6	563.9	285.5	51.4	1.000034
56000.0	88.4	-63.3		146.7	564.4	285.2	47.6	1.000033
56500.0	86.2	-62.9		142.9	564.8	284.8	43.7	1.000032
57000.0	84.1	-62.6		139.2	565.3	284.4	40.1	1.000031
57500.0	82.1	-63.0		136.1	564.8	284.0	37.1	1.000030
58000.0	80.1	-63.4		133.0	564.2	283.6	34.0	1.000030
58500.0	78.1	-63.9		130.1	563.6	283.6	31.3	1.000029
59000.0	76.2	-64.3		127.2	563.0	283.9	28.6	1.000028
59500.0	74.4	-64.7		124.3	562.4	284.3	26.0	1.000028
60000.0	72.6	-63.9		120.8	563.5	286.1	23.9	1.000027
60500.0	70.8	-62.4		117.0	565.6	288.2	21.8	1.000026
61000.0	69.1	-61.8		113.9	566.3	290.9	20.0	1.000025
61500.0	67.4	-62.1		111.3	566.0	294.4	18.7	1.000025
62000.0	65.8	-62.4		108.7	565.6	298.6	17.4	1.000024
62500.0	64.2	-62.6		106.2	565.2	302.0	16.4	1.000024
63000.0	62.6	-62.9		103.7	564.9	305.2	15.6	1.000023
63500.0	61.1	-63.2		101.3	564.5	308.0	14.8	1.000023

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81
ASCENSION NO. 319

UPPER AIR DATA
3510010319
HOLLUMAN
TABLE 12 CON'T

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	59.6	-63.4			99.0	564.2	308.5	14.7	1.000022
64500.0	58.2	-63.7			96.7	563.8	308.4	14.6	1.000022
65000.0	56.7	-63.9			94.5	563.5	307.0	15.0	1.000021
65500.0	55.4	-64.0			92.2	563.4	304.1	16.1	1.000021
66000.0	54.0	-64.2			90.0	563.2	301.5	17.2	1.000020
66500.0	52.7	-64.3			87.9	563.1	299.7	17.9	1.000020
67000.0	51.4	-64.4			85.8	562.9	298.3	18.3	1.000019
67500.0	50.1	-64.5			83.7	562.8	296.9	18.7	1.000019
68000.0	48.9	-64.0			81.5	563.4	296.1	18.3	1.000018
68500.0	47.7	-63.5			79.3	564.1	295.8	17.3	1.000018
69000.0	46.6	-63.0			77.2	564.8	295.4	16.3	1.000017
69500.0	45.5	-62.4			75.1	565.5	294.6	15.4	1.000017
70000.0	44.3	-61.9			73.1	566.3	293.5	14.9	1.000016
70500.0	43.3	-61.3			71.2	567.0	292.3	14.3	1.000016
71000.0	42.2	-61.0			69.3	567.4	290.3	14.3	1.000015
71500.0	41.2	-61.1			67.7	567.4	287.4	15.7	1.000015
72000.0	40.2	-61.1			66.1	567.3	284.9	17.2	1.000015
72500.0	39.3	-61.2			64.5	567.2	282.5	18.9	1.000014
73000.0	38.3	-61.2			63.0	567.2	279.9	21.3	1.000014
73500.0	37.4	-60.7			61.3	567.8	277.9	23.6	1.000014
74000.0	36.5	-60.1			59.7	568.6	276.2	25.7	1.000013
74500.0	35.6	-59.6			58.1	569.3	274.6	26.8	1.000013
75000.0	34.8	-59.0			56.6	570.1	273.2	28.0	1.000013
75500.0	34.0	-58.5			55.1	570.8	272.8	29.4	1.000012
76000.0	33.2	-57.9			53.7	571.5	274.9	31.2	1.000012
76500.0	32.4	-57.4			52.3	572.3	276.7	33.1	1.000012
77000.0	31.6	-56.8			50.9	573.0	278.9	35.4	1.000011
77500.0	30.9	-56.2			49.6	573.8	282.0	39.3	1.000011
78000.0	30.1	-55.7			48.3	574.5	284.7	43.3	1.000011
78500.0	29.4	-55.1			47.0	575.3	286.7	47.1	1.000010
79000.0	28.7	-54.5			45.8	576.0	286.3	48.0	1.000010
79500.0	28.1	-53.9			44.6	576.8	285.9	48.8	1.000010
80000.0	27.4	-53.6			43.5	577.2	285.5	49.7	1.000010
80500.0	26.8	-53.6			42.5	577.2	284.0	48.5	1.000009
81000.0	26.1	-53.7			41.5	577.1	281.4	46.0	1.000009
81500.0	25.5	-53.7			40.5	577.1	278.4	43.6	1.000009
82000.0	24.9	-53.7			39.6	577.1	275.3	41.4	1.000009
82500.0	24.4	-53.8			38.7	577.0	273.3	40.0	1.000009
83000.0	23.8	-53.8			37.8	577.0	271.5	38.8	1.000008
83500.0	23.2	-53.6			36.9	577.2	269.1	37.6	1.000008

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81 0830 HRS MST
ASCENSION NO. 319

UPPER AIR DATA
3510010319
HOLLOMAN
TABLE 12 CON'T

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
84000.0	22.7	-53.4		36.0	577.5			1.000008
84500.0	22.2	-53.3		35.1	577.7			1.000008
85000.0	21.7	-53.1		34.3	577.9			1.000008
85500.0	21.2	-52.9		33.5	578.1			1.000007
86000.0	20.7	-52.8		32.7	578.4			1.000007

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81
ASCENSION NO. 319

MANDATORY LEVELS
3510010319
HOLLUMAN
TABLE 13

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5098.	6.4	-4.9	44.	9999.0	9999.0XX	
800.0	6724.	4.2	-8.2	40.	9999.0	9999.0XX	
750.0	8434.	.3	-8.5	52.	9999.0	9999.0XX	
700.0	10242.	-1.9	-8.0	63.	310.3	23.8	
650.0	12172.	-3.2	-22.6	21.	292.0	35.7	
600.0	14238.	-6.7	-23.5	25.	306.3	40.7	
550.0	16453.	-10.4	-29.0	20.	311.7	46.0	
500.0	18839.	-15.1	-32.0	22.	297.7	49.8	
450.0	21426.	-20.6	-36.4	23.	298.4	54.5	
400.0	24246.	-27.4	-41.3	25.	298.3	55.7	
350.0	27357.	-34.6	-47.8		300.2	55.5	
300.0	30825.	-43.1			299.1	63.7	
250.0	34779.	-52.7			295.0	45.0	
200.0	39388.	-62.4			282.7	64.8	
175.0	42086.	-61.9			282.1	75.3	
150.0	45215.	-61.2			284.6	78.9	
125.0	48898.	-63.0			293.9	59.2	
100.0	53355.	-66.7			289.0	47.3	
80.0	57839.	-63.5			283.6	34.0	
70.0	60525.	-61.7			289.1	21.0	
60.0	63645.	-63.4			308.5	14.7	
50.0	67309.	-64.5			296.8	18.7	
40.0	71831.	-61.1			284.5	17.4	
30.0	77756.	-55.6			284.9	43.7	
25.0	81594.	-53.7			275.8	41.7	

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4126.59 FEET MSL
17 DEC. 81 0830 HRS MST
ASCENSION NO. 319

MRN MANDATORY LEVELS
3510010319
HOLLOMAN

TABLE 13 CON'T

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	D-W PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
2487.	276.	21.	-2.	21.	99	-53.7		2.500+1
2370.	285.	22.	-6.	22.	99	-55.6		3.000+1
2189.	285.	9.	-2.	9.	99	-61.1		4.000+1
2052.	297.	10.	-4.	9.	99	-64.5		5.000+1
1940.	309.	8.	-5.	6.	99	-63.4		6.000+1
1845.	289.	11.	-4.	10.	99	-61.7		7.000+1
1763.	284.	18.	-4.	17.	99	-63.5		8.000+1
1626.	289.	24.	-8.	23.	99	-66.7		1.000+2
1490.	294.	30.	-12.	28.	99	-63.0		1.250+2
1378.	285.	41.	-10.	39.	99	-61.2		1.500+2
1283.	282.	39.	-8.	38.	99	-61.9		1.750+2
1201.	283.	33.	-7.	33.	99	-62.4		2.000+2
1060.	295.	23.	-10.	21.	99	-52.7		2.500+2
940.	299.	33.	-16.	29.	99	-43.1		3.000+2
834.	300.	29.	-14.	25.	13	-34.6		3.500+2
739.	298.	29.	-14.	25.	14	-27.4		4.000+2
653.	298.	28.	-13.	25.	16	-20.6		4.500+2
574.	298.	26.	-12.	23.	17	-15.1		5.000+2
501.	312.	24.	-16.	18.	19	-10.4		5.500+2
434.	306.	21.	-12.	17.	17	-6.7		6.000+2
371.	292.	18.	-7.	17.	19	-3.2		6.500+2
312.	310.	12.	-8.	9.	06	-1.9		7.000+2
257.	9999.**	9999.**	-9999.**	-9999.**	09	.3		7.500+2
205.	9999.**	9999.**	-9999.**	-9999.**	12	4.2		8.000+2
155.	9999.**	9999.**	-9999.**	-9999.**	11	6.4		8.500+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

3511020745
WHITE SANDS

TABLE 14

STATION ALTITUDE 3989.00 FEET MSL
17 DEC. 61
ASCENSION NO. 745

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
MILLIBARS	MSL FEET		
885.7	3989.0	7.5	-4.9
866.2	4586.7	3.5	-5.7
856.6	4883.6	3.1	-5.3
850.0	5089.8	3.7	-5.0
789.6	7052.5	2.6	-7.3
752.8	8316.8	.8	-8.4
743.4	8648.6	.8	-8.2
700.0	10228.0	-2.3	-9.9
693.9	10456.4	-2.4	-10.6
679.8	10993.7	-2.8	-14.0
593.8	14504.9	-6.7	-18.6
560.2	15991.6	-9.9	-21.8
551.6	16384.0	-10.0	-21.9
500.0	18843.3	-16.6	-27.8
464.2	20669.5	-19.6	-27.5
425.8	22757.2	-25.0	-35.7
403.8	24019.4	-27.6	-38.0
400.0	24243.0	-28.0	-38.4
369.2	26117.9	-32.8	-43.0
355.4	26997.6	-34.4	-44.4
316.4	29632.4	-41.7	
300.0	30814.6	-43.9	
267.6	33308.4	-49.9	
250.0	34764.6	-52.6	
245.0	35193.5	-53.6	
223.4	37130.7	-57.6	
200.0	39416.2	-60.6	
174.6	42181.7	-63.8	
161.4	43769.8	-64.0	
150.0	45253.3	-62.8	
144.0	45968.3	-63.8	
136.8	47117.4	-63.8	
133.0	47685.7	-64.8	
125.6	48940.0	-64.0	
114.6	50689.7	-64.5	
111.4	51259.2	-65.5	
109.4	51623.5	-64.6	
108.0	51882.4	-65.6	
100.0	53426.7	-65.4	
95.0	54454.6	-66.2	

GEODLTIC COORDINATES
 52.40043 LAT DEG
 106.37033 LON DEG

SIGNIFICANT LEVEL DATA
 3510020745
 WHITE SANDS
 TABLE 14 CON'T

STATION ALTITUDE 3989.00 FEET MSL
 17 DEC. 81
 ASCENSION NO. 745

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. UM. PERCENT
	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	
82.6 57262.0	-61.8		
81.4 57558.2	-62.8		
77.0 58680.8	-65.6		
74.4 59371.8	-64.6		
70.0 60604.8	-63.4		
68.6 61013.2	-64.8		
61.0 63391.9	-62.6		
50.0 67429.3	-64.0		
48.8 67020.2	-64.6		
42.0 70978.3	-60.6		
39.6 72189.1	-60.6		
37.4 73362.3	-61.7		
34.8 74442.1	-60.4		
32.4 76324.8	-57.4		

GEODLTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
351020745
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
17 DEC. 81
0840 HRS MST
ASCENSION NO. 745

TABLE 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	WIND SPEED KNOTS	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3989.0	883.7	7.5	-4.9	1097.4	653.2	10.0	1.9	1.000265
4000.0	883.3	7.4	-4.9	1097.2	653.2	10.1	2.0	1.000265
4500.0	883.6	4.1	-5.5	1090.1	649.2	11.7	4.5	1.000263
5000.0	882.9	3.4	-5.1	1072.2	648.5	12.2	6.9	1.000260
5500.0	837.0	3.5	-5.4	1052.2	648.5	12.4	9.4	1.000255
6000.0	821.4	3.2	-6.0	1033.7	648.2	12.9	10.9	1.000250
6500.0	806.2	2.9	-6.6	1015.5	647.9	16.3	7.7	1.000245
7000.0	791.2	2.6	-7.2	997.7	647.5	13.8	5.6	1.000240
7500.0	776.4	2.0	-7.7	981.5	646.7	351.2	7.9	1.000236
8000.0	761.9	1.3	-8.1	965.6	645.9	338.7	11.3	1.000232
8500.0	747.6	.8	-8.3	949.1	645.3	330.7	16.1	1.000228
9000.0	733.5	.1	-8.5	933.6	644.5	323.6	19.4	1.000224
9500.0	719.7	-.9	-9.1	919.3	643.4	309.5	18.6	1.000221
10000.0	705.1	-1.9	-9.6	905.3	642.2	297.9	19.6	1.000217
10500.0	692.7	-2.3	-10.9	889.6	641.7	298.9	23.9	1.000212
11000.0	679.6	-.8	-14.0	868.4	643.3	299.9	28.0	1.000204
11500.0	666.7	-1.7	-14.6	854.5	642.3	303.2	31.2	1.000200
12000.0	654.0	-2.5	-15.3	840.8	641.3	305.9	34.2	1.000197
12500.0	641.5	-3.3	-15.9	827.4	640.3	308.9	35.8	1.000193
13000.0	629.2	-4.2	-16.6	814.1	639.2	311.5	37.5	1.000190
13500.0	617.2	-5.0	-17.3	801.1	638.2	312.4	39.0	1.000187
14000.0	605.5	-5.9	-17.9	788.4	637.2	312.9	40.4	1.000184
14500.0	593.9	-6.7	-18.6	775.8	636.2	311.2	40.8	1.000180
15000.0	582.4	-7.8	-19.7	763.9	634.9	309.6	41.2	1.000177
15500.0	571.1	-8.8	-20.7	752.1	633.6	308.3	41.0	1.000174
16000.0	560.0	-9.9	-21.8	740.6	632.3	307.3	41.1	1.000171
16500.0	549.0	-10.3	-22.2	727.2	631.8	307.0	41.5	1.000168
17000.0	538.2	-11.7	-23.4	716.5	630.2	306.6	42.0	1.000165
17500.0	527.6	-13.0	-24.6	706.0	628.5	306.7	42.9	1.000162
18000.0	517.1	-14.3	-25.8	695.7	626.9	306.3	43.4	1.000159
18500.0	506.9	-15.7	-27.0	685.5	625.3	305.4	43.1	1.000157
19000.0	496.8	-16.9	-27.8	675.0	623.8	304.5	42.9	1.000154
19500.0	486.8	-17.7	-27.6	663.5	622.8	303.7	42.9	1.000151
20000.0	477.0	-18.5	-27.5	652.2	621.8	303.1	43.3	1.000149
20500.0	467.4	-19.3	-27.5	641.2	620.8	302.6	44.2	1.000147
21000.0	457.9	-20.5	-28.8	631.0	619.4	302.6	44.9	1.000144
21500.0	448.5	-21.7	-30.7	621.3	617.8	303.4	45.2	1.000141
22000.0	439.3	-23.0	-32.7	611.7	616.2	304.4	45.5	1.000139
22500.0	430.4	-24.3	-34.6	602.4	614.6	305.6	45.9	1.000136
23000.0	421.5	-25.5	-36.1	592.7	613.2	306.4	46.5	1.000134

STATION ALTITUDE 3989.00 FEET MSL
 17 DEC. 81
 ASCENSION NO. 745

UPPER AIR DATA
 3510020745
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 15 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	412.7	-26.5	-37.1	582.8	611.9	306.2	47.4	1.000131
24000.0	404.1	-27.6	-38.0	573.1	610.6	306.0	48.9	1.000129
24500.0	395.6	-28.7	-39.0	563.6	609.2	305.9	50.8	1.000127
25000.0	387.3	-29.9	-40.2	554.6	607.6	305.7	52.4	1.000125
25500.0	379.1	-31.2	-41.5	545.8	606.0	305.5	54.0	1.000123
26000.0	371.1	-32.5	-42.7	537.1	604.4	304.1	53.0	1.000121
26500.0	363.1	-33.5	-43.6	527.8	603.1	302.5	51.6	1.000118
27000.0	355.4	-34.4	-44.4	518.5	602.0	302.0	51.0	1.000116
27500.0	347.6	-35.8	-47.6	510.1	600.2	301.0	50.5	1.000114
28000.0	340.0	-37.2	-51.1	501.9	598.5	302.2	51.4	1.000112
28500.0	332.6	-38.6	-55.3	493.9	596.7	302.6	52.0	1.000110
29000.0	325.4	-39.9	-61.0	486.0	594.9	302.2	51.9	1.000108
29500.0	318.3	-41.3	-73.1	478.3	593.2	301.6	51.9	1.000107
30000.0	311.2	-42.4		469.8	591.8	300.6	51.8	1.000105
30500.0	304.3	-43.3		461.2	590.6	299.5	51.8	1.000103
31000.0	297.5	-44.3		452.9	589.3	298.3	51.8	1.000101
31500.0	290.7	-45.5		445.0	587.7	297.2	52.0	1.000099
32000.0	284.1	-46.8		437.2	586.2	296.2	52.5	1.000097
32500.0	277.7	-48.0		429.6	584.6	295.5	53.5	1.000096
33000.0	271.4	-49.2		422.1	583.1	294.8	54.7	1.000094
33500.0	265.2	-50.3		414.5	581.6	293.8	56.0	1.000092
34000.0	259.1	-51.2		406.6	580.4	292.7	57.4	1.000091
34500.0	253.1	-52.1		398.9	579.2	290.9	58.4	1.000089
35000.0	247.2	-53.1		391.5	577.8	288.9	59.4	1.000087
35500.0	241.4	-54.2		384.2	576.4	287.7	60.2	1.000086
36000.0	235.8	-55.3		377.0	575.1	286.6	61.1	1.000084
36500.0	230.2	-56.3		369.8	573.7	286.7	62.2	1.000082
37000.0	224.8	-57.3		362.9	572.3	286.8	63.4	1.000081
37500.0	219.4	-58.1		355.5	571.3	286.7	65.3	1.000079
38000.0	214.2	-58.7		348.0	570.4	286.6	67.3	1.000078
38500.0	209.1	-59.4		340.7	569.6	286.2	69.1	1.000076
39000.0	204.1	-60.1		333.6	568.7	285.8	70.9	1.000074
39500.0	199.2	-60.7		326.6	567.8	285.1	71.8	1.000073
40000.0	194.3	-61.3		319.5	567.1	284.4	72.1	1.000071
40500.0	189.6	-61.9		312.6	566.3	283.3	70.1	1.000070
41000.0	185.0	-62.4		305.9	565.5	282.2	68.1	1.000068
41500.0	180.5	-63.0		299.3	564.7	281.1	65.9	1.000067
42000.0	176.2	-63.6		292.8	564.0	280.1	64.1	1.000065
42500.0	171.9	-63.8		286.1	563.6	281.1	66.2	1.000064
43000.0	167.7	-63.9		279.1	563.5	282.0	68.3	1.000062

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
17 DEC. 61
ASCENSION, NO. 745

UPPER AIR DATA
3510020745
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 15 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMID. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	163.6	-64.0		272.4	563.5	263.7	71.1	1.000061
44000.0	159.6	-63.8		265.6	563.7	285.4	74.1	1.000059
44500.0	155.7	-63.4		258.6	564.2	286.2	76.1	1.000058
45000.0	151.9	-63.0		251.8	564.7	286.7	77.6	1.000056
45500.0	148.2	-63.1		245.8	564.6	286.8	77.5	1.000055
46000.0	144.6	-63.8		240.6	563.7	286.1	75.2	1.000054
46500.0	141.0	-63.8		234.7	563.7	285.6	72.6	1.000052
47000.0	137.6	-63.8		229.0	563.7	286.0	67.7	1.000051
47500.0	134.2	-64.5		224.1	562.8	286.5	62.8	1.000050
48000.0	130.9	-64.6		218.7	562.6	288.8	60.2	1.000049
48500.0	127.7	-64.2		213.0	563.1	291.6	58.1	1.000047
49000.0	124.6	-64.0		207.6	563.4	294.1	56.5	1.000046
49500.0	121.6	-64.2		202.6	563.2	296.5	55.3	1.000045
50000.0	118.6	-64.3		197.8	562.8	297.9	53.6	1.000044
50500.0	115.7	-64.4		193.1	562.8	298.2	51.2	1.000043
51000.0	112.8	-65.0		188.9	562.0	297.7	49.2	1.000042
51500.0	110.1	-64.9		184.1	562.2	295.4	48.2	1.000041
52000.0	107.4	-65.6		180.2	561.3	293.0	47.3	1.000040
52500.0	104.7	-65.5		175.7	561.4	289.3	47.2	1.000039
53000.0	102.1	-65.5		171.3	561.4	285.7	47.2	1.000038
53500.0	99.6	-65.5		167.1	561.4	283.8	47.9	1.000037
54000.0	97.2	-65.8		163.3	560.9	282.6	48.7	1.000036
54500.0	94.8	-66.2		159.5	560.5	282.3	49.2	1.000036
55000.0	92.5	-65.9		155.4	560.8	283.6	48.8	1.000035
55500.0	90.2	-65.7		151.4	561.1	284.9	48.6	1.000034
56000.0	88.0	-65.4		147.5	561.5	285.9	46.6	1.000033
56500.0	85.8	-65.2		143.7	561.8	286.9	44.2	1.000032
57000.0	83.7	-64.9		140.0	562.2	288.2	42.1	1.000031
57500.0	81.6	-63.2		135.4	564.5	290.1	40.8	1.000030
58000.0	79.6	-63.9		132.6	563.5	292.1	39.5	1.000030
58500.0	77.7	-65.1		130.1	561.9	296.0	37.4	1.000029
59000.0	75.8	-65.1		126.9	561.9	301.3	35.2	1.000028
59500.0	73.9	-64.5		123.4	562.8	307.2	33.4	1.000027
60000.0	72.1	-64.0		120.1	563.4	312.2	31.2	1.000027
60500.0	70.4	-63.5		116.9	564.1	317.9	29.3	1.000026
61000.0	68.6	-64.8		114.7	562.4	321.6	28.2	1.000026
61500.0	67.0	-64.3		111.7	562.9	319.2	28.0	1.000025
62000.0	65.3	-63.9		108.3	563.6	316.9	27.9	1.000024
62500.0	63.7	-63.4		105.9	564.2	314.2	26.5	1.000024
63000.0	62.2	-63.0		103.1	564.8	311.0	24.2	1.000023

STATION ALTITUDE 3989.00 FEET MSL
17 DEC. 81
ASCENSION NO. 745

UPPER AIR DATA
3510020745
WHITE SANDS

TABLE 15 CON'T

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND SPEED KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	60.7	-62.6		100.4	565.2	307.4	22.0	1.000022
64000.0	59.2	-62.8		98.0	565.0	306.1	18.0	1.000022
64500.0	57.8	-63.0		95.7	564.8	305.4	13.8	1.000021
65000.0	56.4	-63.2		93.5	564.5	303.6	9.9	1.000021
65500.0	55.0	-63.3		91.3	564.3	302.8	8.4	1.000020
66000.0	53.6	-63.5		89.1	564.1	301.6	6.8	1.000020
66500.0	52.3	-63.7		87.0	563.8	297.4	8.1	1.000019
67000.0	51.1	-63.9		85.0	563.6	294.1	13.5	1.000019
67500.0	49.8	-64.1		83.0	563.3	292.7	18.8	1.000018
68000.0	48.6	-64.5		81.2	562.7	292.2	24.5	1.000018
68500.0	47.4	-63.8		78.9	563.6	292.0	30.3	1.000018
69000.0	46.3	-63.2		76.8	564.5	291.9	36.1	1.000017
69500.0	45.2	-62.5		74.7	565.4	292.9	36.9	1.000017
70000.0	44.1	-61.9		72.7	566.3	293.9	37.2	1.000016
70500.0	43.0	-61.2		70.7	567.1	294.3	38.6	1.000016
71000.0	42.0	-60.6		68.8	568.0	292.0	46.5	1.000015
71500.0	40.9	-60.6		67.1	568.0	290.3	54.4	1.000015
72000.0	40.0	-60.6		65.5	568.0	287.3	59.5	1.000015
72500.0	39.0	-60.9		64.0	567.6	281.6	60.8	1.000014
73000.0	38.1	-61.4		62.6	567.0	276.5	62.6	1.000014
73500.0	37.2	-61.6		61.2	566.7	267.2	52.1	1.000014
74000.0	36.3	-61.1		59.6	567.2	248.0	38.2	1.000013
74500.0	35.4	-60.7		58.0	567.8	215.9	32.2	1.000013
75000.0	34.5	-60.1		56.5	568.7			1.000013
75500.0	33.7	-59.1		54.9	570.0			1.000012
76000.0	32.9	-58.1		53.3	571.4			1.000012

STATION ALTITUDE 3989.00 FEET MSL
17 DEC. 61 0840 HRS MST
ASCENSION, NO. 745

MANDATORY LEVELS
351020745
WHITE SANDS
TABLE 16

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	5086.	3.7	-5.0	53.	12.2	7.3	
800.0	6699.	2.8	-6.9	49.	18.6	6.4	
750.0	8408.	.8	-8.3	50.	331.7	15.3	
700.0	10218.	-2.3	-9.9	56.	296.4	21.5	
650.0	12153.	-2.8	-15.5	37.	306.9	34.7	
600.0	14221.	-6.2	-18.2	38.	312.1	40.6	
550.0	16436.	-10.2	-22.1	37.	307.0	41.4	
500.0	18817.	-16.6	-27.8	37.	304.8	42.9	
450.0	21393.	-21.5	-30.4	44.	303.3	45.1	
400.0	24203.	-28.0	-38.4	36.	305.9	49.7	
350.0	27300.	-35.4	-46.6	30.**	301.7	50.6	
300.0	30754.	-43.9			298.8	51.8	
250.0	34690.	-52.6			289.9	58.9	
200.0	39322.	-60.6			285.2	71.6	
175.0	42030.	-63.7			280.4	64.6	
150.0	45133.	-62.8			287.0	78.3	
125.0	48798.	-64.0			293.8	50.8	
100.0	53264.	-65.4			284.0	47.7	
80.0	57721.	-63.7			291.6	39.8	
70.0	60399.	-63.4			318.8	29.1	
60.0	63503.	-62.7			306.5	20.6	
50.0	67178.	-64.0			292.9	17.7	
40.0	71699.	-60.6			287.9	59.4	

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 61
ASCENSION NO. 223

SIGNIFICANT LEVEL DATA
3510030223
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 17

PRESSURE	GEOMETRIC ALTITUDE MSL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT
883.2	4051.0	3.5	46.0
875.2	4294.0	4.8	35.0
865.6	4590.6	7.2	32.0
858.0	5080.7	6.2	30.0
798.0	6768.9	2.8	36.0
759.8	8070.6	1.8	41.0
731.0	9090.2	-4	44.0
717.9	9564.6	-1.3	34.0
700.0	10226.4	-7	22.0
684.6	10809.8	-1.0	22.0
595.6	14413.8	-7.9	20.0
558.6	16044.0	-10.6	21.0
510.5	18299.3	-15.7	24.0
500.0	18814.1	-16.4	24.0
400.0	24206.3	-28.3	26.0
379.9	25416.0	-31.3	27.0
358.7	26748.3	-33.6	27.0
331.5	28552.7	-38.0	27.0
300.0	30789.5	-43.6	
271.4	32984.6	-48.3	
250.0	34747.3	-53.0	
221.8	37253.4	-57.2	
200.0	39376.3	-61.8	
189.1	40515.9	-63.1	
176.4	41928.4	-62.2	
155.9	44443.7	-62.3	
150.0	45231.2	-61.2	
117.9	50136.0	-63.3	
103.1	52823.2	-64.3	
100.0	53428.6	-67.6	
88.1	55963.3	-64.7	
85.3	56617.3	-62.3	
70.9	60381.8	-62.9	
70.0	60642.5	-61.3	
57.9	64496.1	-65.1	
50.0	67450.4	-64.9	
41.5	71244.6	-60.6	
30.0	77971.3	-57.5	
21.7	84709.6	-54.3	
20.0	86528.9	-52.1	

STATION ALTITUDE 4051.00 FEET MSL
 17 DEC. 61 0840 HRS MST
 ASCENSION NO. 223

SIGNIFICANT LEVEL DATA
 3510030223
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 17 CON'T

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	DEW POINT DEGREES	REL. HUM. PERCENT
MILLIBARS	MSL FEET		CENTIGRADE	
17.1	89894.0		-51.1	

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 61
ASCENSION NO. 223

UPPER AIR DATA
351003022J
JALLEN

GEOCLTIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.0	883.2	3.5	46.0	1110.4	648.5	35.0	4.1	1.000265
4500.0	868.5	6.5	32.9	1080.6	651.9	350.0	3.8	1.000256
5000.0	852.6	6.4	30.3	1061.2	651.7	325.2	5.4	1.000251
5500.0	836.8	5.4	31.5	1045.3	650.6	310.0	7.7	1.000247
6000.0	821.3	4.3	33.3	1029.7	649.4	307.1	9.9	1.000243
6500.0	806.1	3.3	35.0	1014.3	648.2	317.3	11.2	1.000239
7000.0	791.1	2.6	36.9	998.0	647.4	321.4	11.8	1.000236
7500.0	776.3	2.2	38.8	980.7	646.9	321.5	11.6	1.000232
8000.0	761.8	1.9	40.7	963.7	646.5	305.3	10.7	1.000229
8500.0	747.5	.9	42.3	949.0	645.3	284.3	11.0	1.000225
9000.0	733.5	-2.2	43.7	934.9	644.1	275.4	14.0	1.000222
9500.0	719.7	-1.2	35.4	920.9	642.8	270.5	17.3	1.000215
10000.0	700.1	-9.9	26.1	902.8	643.1	277.1	20.2	1.000209
10500.0	692.7	-1.4	22.0	885.6	643.1	282.7	23.2	1.000204
11000.0	679.6	-8.8	21.9	870.5	642.5	288.5	25.9	1.000200
11500.0	666.6	-2.3	21.6	856.9	641.3	293.2	28.8	1.000197
12000.0	653.8	-3.3	21.3	843.5	640.2	294.8	31.0	1.000193
12500.0	641.3	-4.2	21.1	830.3	639.0	295.9	33.1	1.000190
13000.0	629.0	-5.2	20.8	817.4	637.9	298.7	34.9	1.000187
13500.0	617.0	-6.2	20.5	804.6	636.7	301.9	36.6	1.000183
14000.0	605.2	-7.1	20.2	792.1	635.6	305.6	38.9	1.000180
14500.0	593.6	-8.0	20.1	779.7	634.4	309.5	41.7	1.000177
15000.0	582.0	-8.9	20.4	766.9	633.5	312.3	44.0	1.000174
15500.0	570.7	-9.7	20.7	754.3	632.5	313.8	45.3	1.000171
16000.0	559.6	-10.5	21.0	742.0	631.5	315.0	46.5	1.000168
16500.0	548.5	-11.6	21.6	730.4	630.1	314.1	47.1	1.000166
17000.0	537.7	-12.8	22.3	719.1	628.8	313.3	47.7	1.000163
17500.0	527.1	-13.9	22.9	708.0	627.4	311.2	49.0	1.000160
18000.0	516.6	-15.0	23.6	697.0	626.0	309.2	50.4	1.000158
18500.0	506.4	-16.0	24.0	685.7	624.9	306.9	50.8	1.000155
19000.0	496.2	-16.8	24.1	674.1	623.8	304.7	51.1	1.000152
19500.0	486.0	-17.9	24.3	663.2	622.5	302.1	51.2	1.000150
20000.0	476.1	-19.0	24.4	652.4	621.1	299.6	51.4	1.000147
20500.0	466.3	-20.1	24.6	641.8	619.8	298.4	53.6	1.000145
21000.0	456.8	-21.2	24.8	631.5	618.4	297.5	55.6	1.000142
21500.0	447.4	-22.3	25.0	621.3	617.1	297.7	57.0	1.000140
22000.0	438.2	-23.4	25.2	611.2	615.7	297.9	58.3	1.000138
22500.0	429.3	-24.5	25.4	601.4	614.3	299.6	60.3	1.000135
23000.0	420.5	-25.6	25.6	591.7	613.0	301.1	62.3	1.000133
23500.0	411.9	-26.7	25.7	582.2	611.6	301.7	62.3	1.000131

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 61
ASCENSION NO. 223

UPPER AIR DATA
3514030223
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 18 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		EL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE				DIRECTION, DEGREES (TN)	SPEED KNOTS	
24000.0	403.4	-27.8	-41.4	25.9	572.8	610.2	302.2	62.2	1.000129
24500.0	395.0	-29.0	-42.3	26.2	563.6	608.7	301.7	59.6	1.000126
25000.0	386.7	-30.3	-43.2	26.7	554.6	607.2	301.2	57.1	1.000124
25500.0	378.5	-31.4	-44.1	27.0	545.5	605.7	302.0	58.9	1.000122
26000.0	370.5	-32.3	-44.9	27.0	535.8	604.6	302.0	60.7	1.000120
26500.0	362.6	-33.2	-45.7	27.0	526.3	603.5	303.1	62.5	1.000118
27000.0	354.8	-34.2	-46.6	27.0	517.2	602.2	303.4	64.1	1.000116
27500.0	347.1	-35.4	-47.7	27.0	508.6	600.7	303.3	64.4	1.000114
28000.0	339.6	-36.7	-48.7	27.0	500.2	599.1	303.3	64.4	1.000112
28500.0	332.3	-37.9	-49.8	27.0	491.9	597.6	303.2	65.9	1.000110
29000.0	324.9	-39.1	-52.8	21.6**	483.7	596.0	303.0	67.5	1.000108
29500.0	317.8	-40.4	-56.5	15.6**	475.6	594.4	303.0	68.6	1.000106
30000.0	310.8	-41.6	-61.4	9.5**	467.6	592.8	303.0	69.7	1.000104
30500.0	303.9	-42.9	-69.6	3.5**	459.7	591.2	302.7	68.8	1.000102
31000.0	297.1	-44.1			451.8	589.7	302.4	67.6	1.000101
31500.0	290.4	-45.1			443.7	588.3	302.0	65.8	1.000099
32000.0	283.9	-46.2			435.7	586.9	301.6	63.7	1.000097
32500.0	277.5	-47.3			427.9	585.5	301.2	61.7	1.000095
33000.0	271.2	-48.3			420.3	584.1	300.9	59.7	1.000094
33500.0	265.0	-49.7			413.0	582.4	300.2	58.9	1.000092
34000.0	258.9	-51.0			405.9	580.6	298.9	59.4	1.000090
34500.0	252.9	-52.3			399.0	578.9	297.4	60.3	1.000089
35000.0	247.0	-53.6			392.0	577.2	295.6	61.9	1.000087
35500.0	241.2	-54.9			384.9	575.6	293.9	63.4	1.000086
36000.0	235.5	-56.1			377.9	574.0	292.6	64.1	1.000084
36500.0	229.9	-57.3			371.1	572.3	291.3	64.8	1.000083
37000.0	224.5	-58.6			364.5	570.7	290.1	65.5	1.000081
37500.0	219.2	-59.5			357.3	569.4	288.9	66.1	1.000080
38000.0	213.9	-60.1			349.7	568.6	287.7	66.8	1.000078
38500.0	208.7	-60.7			342.3	567.8	286.2	67.3	1.000076
39000.0	203.7	-61.3			335.0	567.0	284.7	67.8	1.000075
39500.0	198.8	-61.9			327.9	566.2	283.3	68.6	1.000073
40000.0	194.0	-62.5			320.8	565.4	282.4	69.5	1.000071
40500.0	189.2	-63.1			313.8	564.6	281.6	70.7	1.000070
41000.0	184.6	-62.8			305.8	565.0	281.0	72.4	1.000068
41500.0	180.2	-62.5			297.9	565.5	280.6	74.0	1.000066
42000.0	175.8	-62.2			290.3	565.8	281.2	75.8	1.000065
42500.0	171.5	-62.2			283.3	565.8	281.6	77.6	1.000063
43000.0	167.4	-62.2			276.4	565.8	282.5	78.6	1.000062
43500.0	163.3	-62.3			269.7	565.7	283.6	79.4	1.000060

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
 17 DEC. 81 0840 HRS MST
 ASCENSION NO. 223

UPPER AIR DATA
 3510030223
 JALLEN

GEODETIC COORDINATES
 33.18712 LAT DEG
 106.49511 LON DEG

TABLE 18 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (IN)	SPEED KNOTS	
44000.0	159.3	-62.3		263.2	565.7	284.5	79.9	1.000059
44500.0	155.5	-62.2		256.8	565.8	284.8	79.6	1.000057
45000.0	151.7	-61.5		249.7	566.7	285.1	79.3	1.000056
45500.0	148.0	-61.3		243.4	567.0	285.2	78.1	1.000054
46000.0	144.4	-61.5		237.8	566.7	285.2	76.5	1.000053
46500.0	140.9	-61.7		232.2	566.4	285.2	74.9	1.000052
47000.0	137.5	-62.0		226.8	566.2	286.9	71.8	1.000051
47500.0	134.2	-62.2		221.6	565.9	288.7	68.8	1.000049
48000.0	130.9	-62.4		216.4	565.6	290.7	65.3	1.000048
48500.0	127.8	-62.6		211.4	565.3	293.2	60.8	1.000047
49000.0	124.7	-62.8		206.5	565.0	296.1	56.5	1.000046
49500.0	121.6	-63.0		201.7	564.7	297.4	52.6	1.000045
50000.0	118.7	-63.2		197.0	564.4	298.2	48.9	1.000044
50500.0	115.8	-64.0		192.8	563.4	298.5	45.8	1.000043
51000.0	112.9	-64.9		188.9	562.2	296.3	44.7	1.000042
51500.0	110.1	-65.8		185.1	560.9	294.0	43.6	1.000041
52000.0	107.4	-66.8		181.3	559.7	291.1	43.6	1.000040
52500.0	104.8	-67.7		177.7	558.4	287.8	44.4	1.000040
53000.0	102.2	-68.1		173.6	557.9	284.6	45.3	1.000039
53500.0	99.6	-67.5		168.8	558.7	283.0	46.8	1.000038
54000.0	97.2	-66.9		164.2	559.4	281.7	48.3	1.000037
54500.0	94.8	-66.4		159.7	560.2	280.9	49.6	1.000036
55000.0	92.4	-65.8		155.3	561.0	281.6	49.6	1.000035
55500.0	90.2	-65.2		151.1	561.8	282.3	49.6	1.000034
56000.0	87.9	-64.6		146.9	562.6	283.7	49.3	1.000033
56500.0	85.8	-62.7		142.0	565.1	285.0	48.7	1.000032
57000.0	83.7	-62.4		138.4	565.6	287.5	48.2	1.000031
57500.0	81.7	-62.4		135.0	565.5	289.7	47.4	1.000030
58000.0	79.7	-62.5		131.8	565.4	292.0	46.5	1.000029
58500.0	77.8	-62.6		128.7	565.3	294.3	45.7	1.000029
59000.0	75.9	-62.7		125.6	565.2	296.7	41.5	1.000028
59500.0	74.0	-62.8		122.6	565.1	299.0	37.4	1.000027
60000.0	72.2	-62.8		119.7	565.0	303.0	33.4	1.000027
60500.0	70.5	-62.2		116.4	565.9	306.3	29.4	1.000026
61000.0	68.8	-61.7		113.3	566.6	310.5	25.5	1.000025
61500.0	67.1	-62.1		110.8	565.9	314.4	23.0	1.000025
62000.0	65.5	-62.6		108.3	565.2	315.9	22.6	1.000024
62500.0	63.9	-63.1		106.0	564.6	317.5	22.1	1.000024
63000.0	62.3	-63.5		103.6	563.9	318.4	21.2	1.000023
63500.0	60.8	-64.1		101.3	563.3	318.9	19.8	1.000023

STATION ALTITUDE 4051.00 FEET MSL
 17 DEC. 81 0840 HRS MST
 ASCENSION NO. 223

UPPER AIR DATA
 3510030225
 JALLEN
 TABLE 18 CONT

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND SPEED GM/CURIC METER	WIND DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	59.3	-64.6		99.1	319.4	18.4	1.000022
64500.0	57.9	-65.1		96.9	319.9	15.2	1.000022
65000.0	56.5	-65.1		94.5	320.7	11.3	1.000021
65500.0	55.1	-65.0		92.2	322.2	7.4	1.000021
66000.0	53.7	-65.0		89.9	311.9	5.6	1.000020
66500.0	52.4	-65.0		87.7	292.7	4.2	1.000020
67000.0	51.1	-64.9		85.5	264.4	3.7	1.000019
67500.0	49.9	-64.8		83.4	271.7	6.2	1.000019
68000.0	48.7	-64.3		81.2	274.8	8.7	1.000018
68500.0	47.5	-63.7		79.0	277.3	11.3	1.000018
69000.0	46.3	-63.1		76.9	283.7	14.2	1.000017
69500.0	45.2	-62.6		74.8	287.8	17.3	1.000017
70000.0	44.1	-62.0		72.8	289.9	20.1	1.000016
70500.0	43.0	-61.4		70.8	288.9	21.5	1.000016
71000.0	42.0	-60.9		68.9	287.9	23.0	1.000015
71500.0	41.0	-60.5		67.1	287.1	24.4	1.000015
72000.0	40.0	-60.3		65.5	283.2	24.2	1.000015
72500.0	39.1	-60.0		63.8	279.1	23.9	1.000014
73000.0	38.1	-59.8		62.3	275.0	23.9	1.000014
73500.0	37.2	-59.6		60.7	272.2	23.4	1.000014
74000.0	36.3	-59.3		59.2	269.9	22.8	1.000013
74500.0	35.5	-59.1		57.7	267.5	22.2	1.000013
75000.0	34.6	-58.9		56.3	266.7	21.8	1.000013
75500.0	33.8	-58.6		54.9	268.5	21.5	1.000012
76000.0	33.0	-58.4		53.5	270.4	21.3	1.000012
76500.0	32.2	-58.2		52.2	272.4	21.2	1.000012
77000.0	31.4	-57.9		50.9	274.6	22.4	1.000011
77500.0	30.7	-57.7		49.6	277.0	23.6	1.000011
78000.0	30.0	-57.5		48.4	279.0	24.8	1.000011
78500.0	29.3	-57.3		47.2	280.0	26.5	1.000011
79000.0	28.6	-57.0		46.0	280.4	28.4	1.000010
79500.0	27.9	-56.8		44.9	280.6	30.3	1.000010
80000.0	27.2	-56.5		43.8	281.1	32.3	1.000010
80500.0	26.6	-56.3		42.7	281.3	34.6	1.000010
81000.0	26.0	-56.1		41.7	281.4	36.8	1.000009
81500.0	25.4	-55.8		40.7	281.5	39.0	1.000009
82000.0	24.8	-55.6		39.7	281.7	43.3	1.000009
82500.0	24.2	-55.4		38.7	281.0	48.3	1.000009
83000.0	23.6	-55.1		37.8	281.9	53.2	1.000008
83500.0	23.1	-54.9		36.8	281.2	56.7	1.000008

STATION ALTITUDE 4051.00 FEET MSL				UPPER AIR DATA				GEODETIC COORDINATES			
17 DEC. 61				3510030000				33.16712 LAT DEG			
0840 HRS MST				JALLEN				106.49511 LON DEG			
ASCENSION NO. 223				TABLE 18 CONT							
GEOMETRIC ALTITUDE	PRESSURE	TEMPERATURE	REL. HUM.	DENSITY	SPEED OF	WIND DATA		INDEX			
MSL FEET	MILLIBARS	AIR DEGREE	PERCENT	GM/CUBIC	SOUND	DIRECTION,	SPEED	OF	REFRACTION		
		CELSIUS		METER	KNOTS	DEGREES (IN)	KNOTS				
04000.0	22.5	-54.7		35.9	575.8	278.9	57.2		1.000008		
04500.0	22.0	-54.4		35.0	576.1	276.7	57.8		1.000008		
05000.0	21.5	-54.0		34.2	576.7	274.5	58.4		1.000008		
05500.0	21.0	-53.4		33.3	577.5	271.2	57.7		1.000007		
06000.0	20.5	-52.8		32.4	578.3	267.6	57.0		1.000007		
06500.0	20.0	-52.1		31.6	579.2	263.9	56.5		1.000007		
07000.0	19.6	-52.0		30.8	579.4				1.000007		
07500.0	19.1	-51.8		30.1	579.6				1.000007		
08000.0	18.7	-51.7		29.4	579.8				1.000007		
08500.0	18.2	-51.5		28.7	580.0				1.000006		
09000.0	17.8	-51.4		28.0	580.2				1.000006		
09500.0	17.4	-51.2		27.3	580.4				1.000006		

STATION ALTITUDE 4051.00 FEET MSL
17 DEC. 61
ASCENSION NO. 223

MANDATORY LEVELS
3510030223
JALLEN

GEODETTIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 19

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	CFWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5077.	6.2	-10.1	30.	322.0	5.7
800.0	6697.	2.9	-10.7	36.	320.0	11.8
750.0	8407.	1.1	-10.4	42.	267.9	10.9
700.0	10217.	-.7	-19.7	22.	279.8	21.5
650.0	12150.	-3.6	-22.5	21.	295.1	31.6
600.0	14210.	-7.5	-20.5	20.	307.4	40.1
550.0	16416.	-11.5	-29.1	22.	314.2	47.0
500.0	18789.	-16.4	-32.2	24.	305.5	51.0
450.0	21361.	-22.0	-30.7	25.	297.7	56.6
400.0	24168.	-28.3	-41.7	26.	302.0	61.2
350.0	27266.	-35.0	-47.3	27.	303.4	64.1
300.0	30731.	-43.6			302.6	68.2
250.0	34674.	-53.0			296.6	61.0
200.0	39285.	-61.8			283.8	68.4
175.0	41988.	-62.2			281.2	76.0
150.0	45114.	-61.2			285.2	79.0
125.0	48913.	-62.8			295.7	57.1
100.0	53269.	-67.6			283.2	46.5
80.0	57739.	-62.5			291.5	46.7
70.0	60440.	-61.3			307.1	28.5
60.0	63556.	-64.4			319.1	19.1
50.0	67204.	-64.9			270.9	5.8
40.0	71724.	-60.2			283.4	24.2
30.0	77648.	-57.5			278.8	24.6
25.0	81442.	-55.7			281.6	40.9
20.0	86134.	-52.1			263.9	56.5

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
17 DEC. 61 0930 HRS MST
ASCENSION NO. 230

SIGNIFICANT LEVEL DATA
3510100230
LC-37
TABLE 20

GEODLTIC COORDINATES
32.40175 LAT DEG
106.31232 LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	
686.3	4051.4	6.0	-4.2	48.0
850.0	5171.4	3.6	-6.9	46.0
796.4	6907.5	3.4	-9.9	37.0
748.8	8545.0	1.8	-9.4	43.0
729.8	9224.3	.3	-7.9	54.0
711.2	9803.4	-7.7	-12.3	41.0
700.0	10321.6	1.3	-21.7	16.0
612.0	13835.7	-4.4	-26.4	16.0
500.0	18960.3	-15.5	-34.9	17.0
463.2	20845.3	-19.0	-37.3	18.0
400.0	24380.2	-27.2	-43.7	19.0
347.4	27666.4	-35.5	-50.8	
300.0	30908.4	-43.9		
250.0	34917.1	-53.3		
232.0	36491.9	-56.1		
200.0	39566.2	-60.9		
164.0	43596.8	-64.6		
150.0	45401.8	-62.7		
106.6	52295.8	-65.7		
100.0	53578.3	-65.3		
75.0	59339.1	-66.7		
70.0	60721.1	-65.3		
64.2	62477.0	-61.2		
50.0	67560.7	-64.7		
34.2	75371.9	-56.7		

STATION ALTITUDE 4051.37 FEET MSL
17 DEC. 61
ASCENSION NO. 230

UPPLR AIR DATA
3510100230
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31252 LON DEG

TABLE 21

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	EL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	880.3	6.0	-4.2	48.0	1103.9	651.5	0	0	1.000268
4500.0	871.6	5.0	-5.3	47.2	1089.5	650.4	1.2	2.3	1.000263
5000.0	855.5	4.0	-6.5	46.3	1073.6	649.1	1.2	4.9	1.000258
5500.0	839.6	3.6	-7.4	44.3	1055.3	648.6	1.2	7.5	1.000252
6000.0	824.0	3.5	-8.3	41.7	1036.0	648.5	1.1	10.1	1.000247
6500.0	808.7	3.4	-9.1	39.1	1017.0	648.4	358.2	12.6	1.000242
7000.0	793.6	3.3	-9.8	37.3	998.7	648.2	354.7	14.4	1.000237
7500.0	778.8	2.8	-9.7	39.2	981.7	647.6	339.3	12.2	1.000233
8000.0	764.3	2.3	-9.5	41.0	965.1	647.1	320.4	11.3	1.000230
8500.0	750.1	1.8	-9.4	42.8	948.8	646.5	304.7	12.1	1.000226
9000.0	736.0	.8	-8.3	50.4	934.4	645.3	294.7	14.1	1.000225
9500.0	722.2	-.1	-9.6	48.7	920.0	644.2	294.5	17.9	1.000220
10000.0	708.6	-.2	-13.7	35.2	903.5	643.9	295.6	21.8	1.000212
10500.0	695.2	1.0	-21.9	16.0	882.9	645.2	298.8	25.9	1.000202
11000.0	682.1	.2	-22.6	16.0	868.8	644.3	301.0	29.3	1.000199
11500.0	669.2	-.6	-23.3	16.0	854.9	643.3	302.7	31.1	1.000195
12000.0	656.5	-1.4	-23.9	16.0	841.2	642.3	304.4	32.9	1.000192
12500.0	644.1	-2.2	-24.6	16.0	827.8	641.4	306.2	34.8	1.000189
13000.0	631.9	-3.0	-25.3	16.0	814.6	640.4	308.1	36.0	1.000186
13500.0	619.9	-3.9	-25.9	16.0	801.6	639.4	310.2	36.8	1.000182
14000.0	606.0	-4.8	-26.6	16.0	788.9	638.4	311.0	37.3	1.000179
14500.0	596.2	-5.8	-27.5	16.1	776.6	637.1	311.1	37.6	1.000176
15000.0	584.5	-6.9	-28.3	16.2	764.6	635.8	311.3	38.5	1.000173
15500.0	573.1	-8.0	-29.1	16.3	752.7	634.5	311.5	39.6	1.000171
16000.0	561.9	-9.1	-29.9	16.4	741.1	633.2	311.6	39.6	1.000168
16500.0	551.0	-10.2	-30.8	16.5	729.6	631.9	311.7	39.2	1.000165
17000.0	540.2	-11.3	-31.6	16.6	718.3	630.6	306.6	38.3	1.000162
17500.0	529.6	-12.3	-32.5	16.7	707.2	629.2	301.7	37.9	1.000160
18000.0	519.3	-13.4	-33.3	16.8	696.3	627.9	301.0	39.2	1.000157
18500.0	509.2	-14.5	-34.1	16.9	685.6	626.6	301.4	40.9	1.000155
19000.0	499.2	-15.6	-35.0	17.0	675.0	625.3	303.9	43.9	1.000152
19500.0	489.2	-16.5	-35.6	17.3	663.8	624.2	305.1	46.9	1.000150
20000.0	479.4	-17.4	-36.2	17.6	652.9	623.0	304.3	49.4	1.000147
20500.0	469.7	-18.4	-36.8	17.8	642.1	621.9	303.7	51.0	1.000145
21000.0	460.2	-19.4	-37.5	18.0	631.6	620.7	303.7	50.4	1.000142
21500.0	450.8	-20.5	-38.4	18.2	621.5	619.3	303.6	49.9	1.000140
22000.0	441.5	-21.7	-39.4	18.3	611.5	617.8	303.2	49.4	1.000137
22500.0	432.5	-22.8	-40.3	18.5	601.8	616.4	302.7	49.0	1.000135
23000.0	423.6	-24.0	-41.2	18.6	592.2	615.0	302.3	48.3	1.000133
23500.0	414.9	-25.2	-42.1	18.8	582.7	613.5	301.8	47.5	1.000131

STATION ALTITUDE 4051.37 FEET MSL
 17 DEC. 51
 ASCENSION NO. 230

UPPER AIR DATA
 3510180230
 LC-37

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

TABLE 21 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	406.4	-26.3	-43.0	18.9	573.4	612.1	301.0	46.9	1.000129
24500.0	397.9	-27.5	-43.9	19.0	564.3	610.6	300.0	46.7	1.000126
25000.0	389.5	-28.8	-45.0	19.0	555.2	609.1	300.0	47.9	1.000124
25500.0	381.2	-30.0	-46.1	19.0	546.2	607.5	301.8	49.6	1.000122
26000.0	373.1	-31.3	-47.2	19.0	537.4	605.9	303.9	50.8	1.000120
26500.0	365.2	-32.6	-48.2	19.0	528.8	604.3	305.8	52.1	1.000118
27000.0	357.5	-33.8	-49.3	19.0	520.3	602.7	304.9	51.3	1.000116
27500.0	349.9	-35.1	-50.4	19.0	512.0	601.1	304.0	50.6	1.000114
28000.0	342.3	-36.3	-52.4	17.1**	503.5	599.5	301.4	49.1	1.000112
28500.0	334.8	-37.6	-55.0	14.2**	495.1	597.9	298.8	47.8	1.000111
29000.0	327.4	-38.9	-57.8	11.3**	486.9	596.3	297.4	47.5	1.000109
29500.0	320.2	-40.2	-61.1	8.4**	478.8	594.7	295.9	47.3	1.000107
30000.0	313.2	-41.4	-65.2	5.6**	470.9	593.0	294.4	47.7	1.000105
30500.0	306.3	-42.7	-71.2	2.7**	463.1	591.4	293.1	48.1	1.000103
31000.0	299.6	-44.0			455.4	589.8	292.6	49.0	1.000101
31500.0	292.7	-45.2			447.3	588.2	292.2	49.7	1.000100
32000.0	286.0	-46.4			439.4	586.7	293.0	50.0	1.000098
32500.0	279.5	-47.5			431.6	585.2	293.6	50.2	1.000096
33000.0	273.1	-48.7			424.0	583.6	293.8	50.8	1.000094
33500.0	266.9	-49.9			416.5	582.1	293.6	51.3	1.000093
34000.0	260.8	-51.1			409.2	580.5	292.5	52.4	1.000091
34500.0	254.9	-52.3			402.0	578.9	291.2	53.6	1.000090
35000.0	249.0	-53.4			394.8	577.4	289.8	55.7	1.000088
35500.0	243.2	-54.3			387.2	576.3	288.5	57.8	1.000086
36000.0	237.5	-55.2			379.6	575.1	287.6	59.6	1.000085
36500.0	231.9	-56.1			372.2	573.9	287.2	61.2	1.000083
37000.0	226.4	-56.9			364.7	572.9	286.4	61.7	1.000081
37500.0	221.0	-57.7			357.3	571.9	285.5	61.6	1.000080
38000.0	215.7	-58.5			350.0	570.8	284.6	62.2	1.000078
38500.0	210.6	-59.2			342.9	569.8	283.8	63.1	1.000076
39000.0	205.5	-60.0			336.0	568.8	283.1	64.4	1.000075
39500.0	200.6	-60.8			329.1	567.7	282.6	66.0	1.000073
40000.0	195.8	-61.3			321.9	567.0	281.9	66.9	1.000072
40500.0	191.0	-61.8			314.8	566.4	280.7	67.1	1.000070
41000.0	186.4	-62.2			307.6	565.8	279.7	67.3	1.000069
41500.0	181.8	-62.7			301.0	565.2	278.7	67.8	1.000067
42000.0	177.4	-63.1			294.3	564.6	277.8	68.3	1.000066
42500.0	173.1	-63.6			287.8	564.0	276.5	69.0	1.000065
43000.0	168.9	-64.1			281.4	563.3	275.9	69.7	1.000063
43500.0	164.8	-64.5			275.1	562.7	275.7	69.1	1.000061

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
17 DEC. 81 0930 HRS MST
ASCENSION NO. 230

UPPER AIR DATA
3516180230
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 21 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
44000.0	160.8	-64.2		268.0	563.2	280.0	67.5	1.000060
44500.0	150.8	-63.6		260.8	563.9	281.1	65.6	1.000058
45000.0	153.0	-63.1		253.8	564.6	280.4	63.1	1.000057
45500.0	149.3	-62.7		247.1	565.1	279.8	60.7	1.000055
46000.0	145.6	-63.0		241.3	564.8	279.2	59.5	1.000054
46500.0	142.1	-63.2		235.7	564.5	278.5	58.3	1.000052
47000.0	138.6	-63.4		230.2	564.2	280.2	58.9	1.000051
47500.0	135.2	-63.6		224.8	563.9	282.4	60.1	1.000050
48000.0	131.9	-63.8		219.5	563.6	284.9	61.6	1.000049
48500.0	128.7	-64.0		214.3	563.3	287.6	63.5	1.000048
49000.0	125.5	-64.3		209.3	563.1	290.1	65.6	1.000047
49500.0	122.4	-64.5		204.4	562.8	291.2	64.3	1.000046
50000.0	119.4	-64.7		199.6	562.5	292.3	63.1	1.000044
50500.0	116.5	-64.9		194.9	562.2	293.0	61.2	1.000043
51000.0	113.7	-65.1		190.4	561.9	293.4	58.8	1.000042
51500.0	110.9	-65.4		185.9	561.6	293.7	56.5	1.000041
52000.0	108.2	-65.6		181.5	561.3	292.5	55.2	1.000040
52500.0	105.5	-65.8		177.1	561.2	291.3	53.8	1.000039
53000.0	102.9	-65.5		172.7	561.4	289.2	52.9	1.000038
53500.0	100.4	-65.3		168.3	561.6	286.6	52.3	1.000037
54000.0	97.9	-65.4		164.2	561.5	284.4	51.8	1.000037
54500.0	95.5	-65.5		160.2	561.4	284.0	51.6	1.000036
55000.0	93.1	-65.6		156.4	561.2	283.5	51.4	1.000035
55500.0	90.8	-65.8		152.6	561.0	284.8	51.8	1.000034
56000.0	88.6	-65.9		148.9	560.9	286.5	52.3	1.000033
56500.0	86.4	-66.0		145.3	560.7	288.0	52.8	1.000032
57000.0	84.3	-66.1		141.8	560.5	289.4	53.4	1.000032
57500.0	82.2	-66.3		138.4	560.4	290.7	54.0	1.000031
58000.0	80.2	-66.4		135.1	560.2	291.5	54.0	1.000030
58500.0	78.2	-66.5		131.8	560.0	292.2	53.9	1.000029
59000.0	76.3	-66.6		128.7	559.9	292.7	53.5	1.000029
59500.0	74.4	-66.5		125.4	560.0	293.0	52.5	1.000028
60000.0	72.6	-66.0		122.1	560.7	293.2	51.4	1.000027
60500.0	70.8	-65.5		118.8	561.4	293.3	50.3	1.000026
61000.0	69.0	-64.6		115.4	562.5	293.4	49.2	1.000026
61500.0	67.4	-63.5		111.9	564.1	293.5	47.4	1.000025
62000.0	65.7	-62.3		108.6	565.7	293.5	44.8	1.000024
62500.0	64.1	-61.2		105.4	567.1	293.6	42.0	1.000023
63000.0	62.6	-61.6		103.0	568.7	293.6	37.7	1.000023
63500.0	61.1	-61.9		100.7	569.2	293.6	33.4	1.000022

STATION ALTITUDE 4051.37 FEET MSL
17 DEC. 81
ASCENSION NO. 230

UPPER AIR DATA
351°180230
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 21 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	59.6	-62.2		98.4	565.8	293.6	30.3	1.000022
64500.0	58.1	-62.6		96.2	565.3	293.6	27.4	1.000021
65000.0	56.7	-62.9		94.0	564.8	293.6	24.0	1.000021
65500.0	55.3	-63.3		91.8	564.4	293.6	19.6	1.000020
66000.0	54.0	-63.6		89.8	563.9	293.6	15.3	1.000020
66500.0	52.7	-64.0		87.7	563.5	293.6	12.2	1.000020
67000.0	51.4	-64.3		85.7	563.0	293.6	9.5	1.000019
67500.0	50.1	-64.7		83.8	562.5	293.6	7.2	1.000019
68000.0	48.9	-64.3		81.6	563.1	293.6	8.6	1.000018
68500.0	47.8	-63.7		79.5	563.8	293.6	10.0	1.000018
69000.0	46.6	-63.2		77.4	564.5	293.6	11.1	1.000017
69500.0	45.5	-62.7		75.3	565.1	293.6	11.7	1.000017
70000.0	44.4	-62.2		73.3	565.8	293.6	12.3	1.000016
70500.0	43.3	-61.7		71.4	566.5	293.6	12.5	1.000016
71000.0	42.3	-61.2		69.5	567.2	293.6	12.7	1.000015
71500.0	41.3	-60.7		67.7	567.9	293.6	13.1	1.000015
72000.0	40.3	-60.2		65.9	568.6	293.6	13.8	1.000015
72500.0	39.3	-59.6		64.2	569.3	293.6	13.7	1.000014
73000.0	38.4	-59.1		62.5	569.9	293.6	12.1	1.000014
73500.0	37.5	-58.6		60.8	570.6	293.6	10.6	1.000014
74000.0	36.6	-58.1		59.2	571.3			1.000013
74500.0	35.7	-57.6		57.7	572.0			1.000013
75000.0	34.8	-57.1		56.1	572.7			1.000013

STATION ALTITUDE 4051.37 FEET MSL
17 DEC. 81
ASCENSION NO. 230

MANDATORY LEVELS
3510180230
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 22

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	ATP	DEWPOINT	PERCENT	DIRECTION	SPEED	
		DEGREES	CENTIGRADE		(TN)	KNOTS	
850.0	5168.	3.6	-6.9	46.	1.2	5.8	
800.0	6782.	3.4	-9.7	38.	357.0	14.1	
750.0	8495.	1.8	-9.4	43.	304.8	12.1	
700.0	10311.	1.3	-21.7	16.	297.7	24.4	
650.0	12256.	-1.8	-24.3	16.	305.4	33.9	
600.0	14330.	-5.5	-27.2	16.	311.1	37.5	
550.0	16549.	-10.3	-30.9	17.	311.5	39.1	
500.0	18934.	-15.5	-34.9	17.	303.7	43.6	
450.0	21518.	-20.6	-38.5	18.	303.6	49.9	
400.0	24340.	-27.2	-43.7	19.	300.3	46.7	
350.0	27446.	-35.1	-50.4	19.	304.0	50.6	
300.0	30907.	-43.9			292.6	48.9	
250.0	34841.	-53.3			290.1	55.2	
200.0	39472.	-60.9			282.6	60.2	
175.0	42179.	-63.4			278.0	66.7	
150.0	45281.	-62.7			279.9	61.3	
125.0	48954.	-64.3			290.2	65.4	
100.0	53414.	-65.3			286.4	52.2	
80.0	57860.	-66.4			291.5	54.0	
70.0	60515.	-65.3			293.4	49.9	
60.0	63634.	-62.1			293.6	31.3	
50.0	67309.	-64.7			293.6	7.3	
40.0	71829.	-60.0			293.6	15.9	

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

FILMED
— 8